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REPORT.

SECTION I.—*Introductory.*

Terms of reference.

1. THE terms of the reference to the Commission are contained in the Resolution of the Government of India in the Commerce and Industry Department No. 8605—8631-32, dated the 10th October 1907, which is reproduced below :—

> "In the Resolution in this Department No. 9974—9993-13, dated the 17th December 1906, it was announced that the Government of India, acting on a suggestion made by the Secretary of State for India, had decided to appoint a Committee to enquire into the conditions of factory labour in textile factories in India. It was stated that the Committee's enquiries would be of a preliminary character only; and a promise was given that, should their report establish the existence of abuses which required to be remedied, a representative Commission would be appointed to examine the whole subject comprehensively before any radical changes were made in the existing factory law.
>
> (2) The report of Sir Hamilton Freer-Smith's Committee was published in the *Gazette of India* on the 1st June last. The Committee was of opinion that several alterations in the present law were necessary.
>
> (3) The Secretary of State has now agreed to the appointment of a Commission to investigate, in respect of all factories in India, the questions referred to Sir Hamilton Freer-Smith's Committee, and the various suggestions and recommendations which that Committee has made.

The Commission will consist of :—

PRESIDENT :

The Hon'ble Mr. W. T. Morison, I.C.S., Officiating Member of Council, Bombay.

MEMBERS :

Mr. W. A. B. Beaumont, Superintending Inspector of Factories, England.

Mr. S. M. Chitnavis, B.A., S.C.S., Deputy Commissioner, Central Provinces.

Lieutenant-Colonel C. Mactaggart, M.A., M.B., I.M.S., Inspector-General of Prisons, United Provinces.

The Hon'ble Mr. Alexander McRobert, nominated by the Upper India Chamber of Commerce.

Dr. T. M. Nair, Municipal Commissioner, Madras.

Mr. John Nicoll, nominated by the Bengal Chamber of Commerce.

The Hon'ble Mr. Vithaldas Damodher Thackersey, nominated jointly by the Bombay Chamber of Commerce and the Bombay Millowners' Association.

SECRETARY:

Mr. J. Campbell, I.C.S., Under Secretary to the Government of India, Department of Commerce and Industry.

The Commission will assemble at Bombay on the 1st November. They will remain on tour until about the 15th April, and the Government of India hope that the enquiry may be completed, and the report submitted, by about the end of May."

Preliminary procedure.

2. The Commission assembled in Bombay on the 1st November 1907, and the question of the procedure to be adopted in the conduct of the enquiry was at once taken up. It was decided to prepare a general statement giving, in as succinct and definite a form as possible, the main points referred to the Commission, and to supplement this by a series of questions addressed (*a*) to factory-owners, agents, and managers generally; (*b*) to factory-owners, agents, and managers of ginning mills and presses; (*c*) to representatives of the various Local Governments; (*d*) to medical witnesses; and (*e*) to general witnesses. The summary containing the main terms of the reference to the Commission, and the series of questions prepared, are reproduced as Appendix A. It was also decided to address every recognized commercial association in India interested in factory legislation, and to request them to nominate representative witnesses who would give written replies to the questions framed, and who would also appear before the Commission for oral examination. The Bombay Chamber of Commerce, the Bombay Millowners' Association, the Ahmedabad Millowners' Association, the Upper India Chamber of Commerce, the Bengal Chamber of Commerce, the Bengal National Chamber of Commerce, the Indian Jute Mills Association, the Narainganj Chamber of Commerce, the Rangoon Chamber of Commerce, the Madras Chamber of Commerce, the Panjab Chamber of Commerce, and the Delhi Millowners' Association were addressed in this sense; and all the witnesses nominated by these bodies were given an opportunity of appearing before the Commission. In addition, the District Magistrate or other local authority in each important industrial centre was addressed, and was asked to nominate witnesses; and the chief executive and medical officers of each centre visited were invited to give evidence. When these preliminaries had been concluded, the various Local Governments were supplied, where that was practicable, with lists showing the witnesses nominated by officers or by commercial associations within their jurisdiction; and they were requested to furnish the names of any other gentlemen who should, in their opinion, be examined by the Commission. The Local Governments were also asked to nominate a representative or representatives to give evidence on their behalf, it being explained that the evidence so tendered would not be regarded either as a complete or final presentment of the Local Government's views on the various questions dealt with. In addition to the lists of witnesses compiled from these sources, a considerable number of witnesses were also summoned by us from time to time in the course of the tour, on our own initiative; and the fullest opportunities were given to all persons desirous of giving evidence to appear and state their views.

The mill hands have nowhere in India any representative body, and in most cases individuals were afraid to come forward and give evidence which might bring down on them the displeasure of their employers. The only way to ascertain their views was to question them informally either at their mills or in their homes, and this course was adopted on several occasions. The President, with one or more members of the Commission, visited the houses of the operatives in Bombay, Ahmedabad, Calcutta, Cawnpore, and Delhi, and questioned as many operatives as could be got together on each occasion; the substance of the statements made will be found either among the recorded evidence, or in the inspection notes.

3. The written replies, when received, were edited to the extent necessary to make them suitable for inclusion in the record of evidence; but in all cases the wording adopted by the witness was retained as far as possible. A few references to purely irrelevant matters, *e.g.*, the cotton excise duties, were omitted. If the witness appeared for oral examination, a record of the proceedings was taken in shorthand, and from that record an abstract was prepared, giving the substance of the evidence. The abstract was then forwarded in print to the witness, who was requested to amplify or amend it, if he considered it either inadequate or inaccurate. The oral evidence, as finally accepted, has been printed in continuation of the written evidence of each witness, where written evidence was tendered.

4. Our tour was arranged in such a manner that no important industrial centre remained unvisited. The first seven days of November were devoted to preliminary work; Ahmedabad was visited from the 8th to the 14th; we inspected the mills at Broach on the 15th; and, returning to Bombay on the 16th November, remained there till the 19th December. Our next centre was Jalgaon, where we remained from the 20th to the 23rd. Meeting again at Agra on the 3rd January, five days were occupied in work there, and at Aligarh and Hathras; seven days were then spent at Cawnpore, and three at Lucknow. We arrived at Calcutta on the 19th January, and remained there till the 11th February, when a short visit was paid to Dacca and Narainganj. Passing again through Calcutta on the 16th, Moulmein was reached on the 19th February. Three days were occupied in work there, and four at Rangoon. We left Rangoon on the 28th February, arriving on the 3rd of March at Madras, where we spent a week. As it was considered advisable to obtain information regarding the working of the mills in the southern districts of Madras, and as time did not admit of the Commission, as a whole, proceeding there, it was decided to depute the Hon'ble Mr. McRobert and Mr. Nicoll to visit the Tinnevelly, Trichinopoly, and Madura districts. These members left the other Commissioners at Madras, rejoining them at Amraoti on the 19th March. The main body of the Commission, in the meantime, inspected the mills at Sholapur, Akola, Amraoti, and Badnera. Leaving Amraoti on the 20th March, Pulgaon and Wardha were visited on that day; the mills at Hinganghat were inspected on the 21st; and on the same day Nagpur

was reached, where we remained until the 26th March. Nine days were then spent in Delhi, two at Amritsar, one at Dhariwal, and three at Lahore. On the 11th April we left Lahore for Simla.

Resignation of Lieutenant-Colonel Mactaggart.

5. Lieutenant-Colonel Mactaggart was, owing to illness, prevented from accompanying us after the conclusion of the work at Jalgaon, and he was eventually obliged, for the same reason, to resign his appointment on the Commission. We desire to take this opportunity of expressing our regret that he should have been compelled by ill-health to abandon the work in which his advice and co-operation were so valuable. At the request of the President, Lieutenant-Colonel Mactaggart has prepared a note dealing with certain of the main points referred to the Commission; the limitations subject to which his opinions are expressed are clearly stated in the note itself, which has been printed as an appendix to this report (Appendix B). Within these limitations we attach great weight to his views regarding the physique of the mill-hands in the Bombay Presidency, based as they are on close observation throughout our tour in that Presidency, and on previous wide experience in examining the physique of large bodies of men in India.

SECTION II.—*The inspection work of the Commission.*

Inspection work: importance of the record prepared.

6. At a very early stage in the course of the enquiry, it became evident that we should have to depend primarily upon our own inspections for accurate information as to the actual conditions prevailing in the factories. The evidence obtainable on this subject was in several cases contradictory, inconsistent and indefinite; and information was sometimes given, in good faith, which careful investigation proved to be erroneous or misleading. The absence of any comprehensive and accurate record dealing with the conditions prevailing in the various factories throughout India, and the necessity for such a compilation as the basis of any discussions of a practical character regarding factory legislation, emphasized the importance of this branch of our work. Every effort has been made to render the record of the inspections made by us thoroughly accurate. In connection with this question, we would point out that the composition of the Commission was such as to afford exceptional opportunities for verifying statements made as to the hours of work, and the conditions of labour, by enquiries from the operatives themselves; and the ability to question the workers in their own languages enabled us, on several occasions, to prove the existence of abuses which it would otherwise have been difficult or impossible to detect.

7. We take this opportunity of acknowledging the courtesy with which we were received by owners, agents, managers, and other factory officials throughout the whole of our tour; in practically all cases every facility was offered for the inspection of the works and the operatives; all requests for information were readily and promptly complied with, even where these involved the expenditure of considerable time and

labour; and in five cases the work of the factory was stopped, and the whole of the male operatives were mustered outside, in order that we might have a favourable opportunity of judging as to their general physical condition. It is entirely owing to the courtesy and co-operation of factory-owners and managers that we have been enabled to prepare so full a record of the conditions at present obtaining in factories in India; and we trust that the information collected will prove useful not only to the Government, but also to those engaged in industrial work in this country. We attach the greatest importance to this record, as it provides a mass of relevant and thoroughly verified facts which must, we consider, form the basis of all proposals of a practical character which may be put forward for the amendment of the existing law: no such material has hitherto been available. The inspection notes are printed as an appendix to this report (Appendix F).

SECTION III.—*General principles adopted by us in framing our recommendations.*

General principles adopted in framing recommendations.

8. The recommendations which we have decided to make as regards the amendment and amplification of the existing law governing the working of factories in India are based solely upon the experience which we have acquired, by actual observation, of the defects in the working of the present Act, and upon our opinions, based upon that experience, as to the practicability of the remedial measures we propose. We desire to make it clear that we have proposed no alterations in, or additions to, the present law solely upon theoretical grounds; in all cases where we recommend any alteration, our recommendation is based upon the conviction that the change is necessary; in all cases where we recommend a new procedure, we are satisfied that the new procedure is not only necessary, but also practically feasible. In framing our recommendations, we have also been guided throughout by the consideration that the welfare of India—of Indian operatives and of Indian industries—must be regarded as absolutely paramount. All of us, with the exception of Mr. Beaumont, have had many years' experience in India; we are profoundly impressed with the necessity for taking all practicable measures to foster the development of Indian industries, and convinced of the dangers likely to result from any attempt to apply to India laws or regulations framed with reference to other, and different, conditions from those obtaining in this country. In particular we would strongly deprecate as most injurious any attempt to apply the laws and regulations governing factory labour in the United Kingdom, *as such*, to India; or to secure any definite relation between the labour laws of England and of India. Any such course must, we are satisfied, be fraught with the gravest danger to this country; and we consider that our experience warrants us in placing upon record a positive and unqualified opinion to the effect that the labour conditions in India are not in any way comparable with those existing in the United Kingdom. Mr. Beaumont, who has had thirty-seven years'

experience of factories in England, entirely concurs in these views; an if further confirmation were required it is supplied by the experienc which the other European members of the Commission possess as regard factory operatives, factory life, and labour conditions generally i England and in India.

SECTION IV.—*Hours at present worked in Indian factories.*

Definition of "excessive hours" and "working hours."

9. It will simplify the discussion of this subject if we state that throughout the report, we hav as a matter of convenience adopt ed the expressions "long hours" or "excessive hours" to denote case where operatives have been actually worked, in any one day, for a perioc exceeding 12 hours. The expression "working hours" or "hour worked" will, unless the contrary appears from the context, be applie to the period for which the operative remained on duty, after deducting all intervals of rest of a definitely ascertained character. For example an operative who worked from 5 A.M. to 8 P.M., with the legal interva of half an hour at noon, would be said to work "excessive hours"; and the "hours worked" would be 14½, even though as a matter of fact the worker had, over and above the ascertained interval, spent one or two hours during the day in the mill compound, eating his food, smoking or loitering.

General statement as to the hours of work.

10. Our enquiries prove that excessive hours are not worked, save on very rare occasions, except in textile factories, and in certain seasonal factories where work is carried on at high pressure for a comparatively short period. In textile factories, excessive hours are frequently worked in cotton mills; in all jute mills weavers are employed for excessive hours, while operatives in the preparing and spinning departments do not, except in a few unimportant cases, work long hours.

Hours of work in textile factories.

11. The following summary of hours in textile factories gives the main facts ascertained during the course of our investigation; more detailed and definite statements as to working hours will be found in the inspection notes, or, in certain cases, in the printed evidence. As a matter of convenience, and in order to make the summary more lucid, we shall restrict it to the case of adult male operatives only, and shall deal separately with each of the more important centres visited.

Ahmedabad.

Only a few of the mills are equipped with electric light; and, except in two or three, work is restricted to daylight hours. The average for the whole year is approximately 12 hours and 7 minutes' actual working time: in the longest days the operatives come to the mills about 5-30 A.M., and leave at 7-30 P.M., giving 13½ hours' working time; the shortest working day is approximately 11 hours. In one of the mills

fitted with electric light the average working time throughout the year is 13 hours 22 minutes; and the longest day was one of 14¾ hours. Throughout the year, the operatives in this mill were frequently worked for over 14 hours a day.

Bombay.

Out of a total of 85 cotton mills in Bombay island, 60 are fitted with electric light installations, and the hours worked in these mills are, in general, excessive. In 1905, when electric light was introduced for the first time in a considerable number of the mills, and when the China and home markets were in a particularly favourable condition, the hours worked in the mills fitted with electric light were, as a rule, from 5 A.M. to 8 P.M.—giving 14½ hours of actual work. In some cases the mills worked from 5 A.M. to 8-35 P.M., or over 15 hours' actual work. After these hours had continued for some months, the matter began to attract a considerable amount of attention; and the Bombay Millowners' Association, at a meeting held in August 1905, passed a resolution in favour of an average 12 hours' day. It was found impossible to secure the general observance of that resolution, however, partly owing to the disinclination of individual millowners to abide by the decision of the Association, and partly owing to the attitude adopted by the employés in several mills when they found that a reduction in the working hours led to a corresponding diminution of their wages. These operatives wished to revert again to the long hour system, and brought pressure on the owners in order to secure this. The position was further complicated by the fact that, while many of the workers were undoubtedly in favour of the long hour day, a very large number were strongly opposed to it. Mills working daylight hours, or an average 12-hour day, found in some cases that their best workers were leaving in order to take advantage of the longer working day in other mills; and in self-defence they, in several cases, adopted a 13-hour or 13½-hour day. Matters ultimately adjusted themselves; and practically all the mills now adopt one or other of the two following systems—they either work daylight hours, irrespective of the question whether they have or have not electric light installations, or they work an average 13 or 13½-hour day all the year round. It is important to note that the Millowners' Association was powerless to enforce its resolution in favour of a 12-hour day, as against the individual members of the Association; and it is clear from the evidence given before us that no reliance can be placed upon any voluntary combination among millowners which has as its object the regulation of working hours, if the system proposed does not suit the convenience—pecuniary and otherwise—of the individual proprietors. It is also noteworthy that, although a large body of the workers were opposed to the system in force in 1905, that system continued in operation for some months without protest on their part.

It will tend to a clearer appreciation of the present position if the actual working hours of the two classes of mills are now stated in somewhat greater detail. The mills fitted with electric light generally begin work about 5-30 A.M., and continue, with the usual half hour's interval about noon, to 7 P.M. A few mills begin work about 5-40 A.M.,

working till 7-15 or even 7-30 P.M.; in one or two others the hours are from 6 A.M. to 8 P.M.—giving 13½ hours' actual work all the year round. In certain mills fitted with electric light it is customary to begin work half an hour later in the cold weather—*i.e.*, about 6 A.M.—without postponing the stopping time to a corresponding extent; in such cases the cold weather day averages about 13 hours, while the hot weather day approximates to 13½ hours of actual work. The mills working daylight hours begin about a quarter of an hour before sunrise, and stop about a quarter of an hour after sunset; the average working time, over the whole year, is approximately 12 hours and 8 minutes; the shortest working day is about 11 hours 10 minutes, from 6-55 A.M. to 6-35 P.M.; and the longest from 5-48 A.M. to 7-33 P.M.—giving 13¼ hours' actual working time.

Broach. One mill works by daylight only, the longest working day being 13 hours 40 minutes in June and the shortest 11 hours 15 minutes in January. The other mill, which is fitted with electric light, generally works from daylight to 7-45 P.M., occasionally to 8-30 P.M. As the mill can begin work at 5-30 A.M. in the hot weather, this means 14½ working hours occasionally.

Agra. The working hours are from daylight to 9 P.M., and this system has been in force since the opening of the mills—in one case for about 20 years. The longest day is from 5-15 A.M. to 9 P.M., giving 15¼ actual working hours. The shortest day—in December and January—is from 6-45 A.M. to 9 P.M., representing 13¾ actual working hours.

Hathras. The working hours are from dawn to 8 P.M.; that is, the hours worked here are only one hour shorter than in Agra.

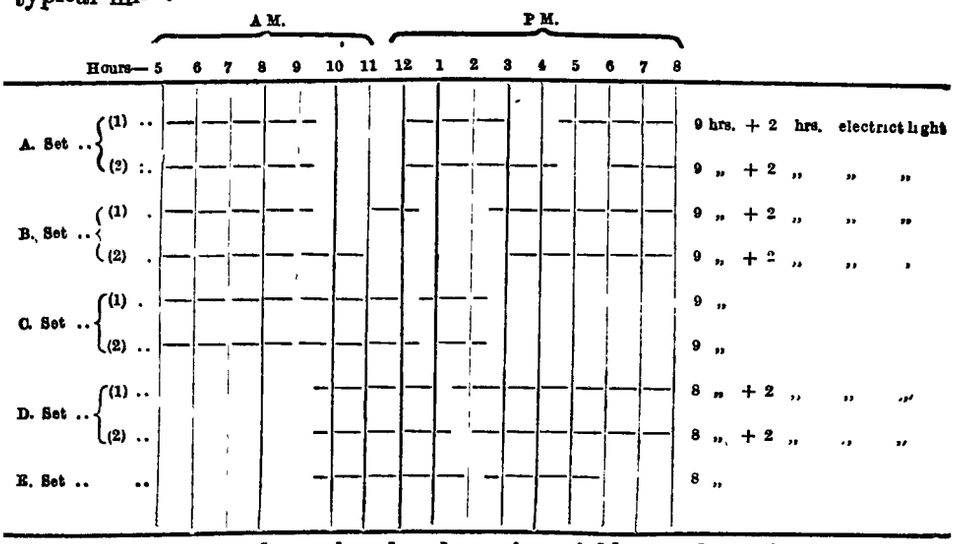
Cawnpore. Two of the cotton mills work a 12-hour day, having been convinced by experience that they obtain better results under that system than by working longer hours. The other cotton mills work daylight hours in the hot weather, and up to 8 P.M., with electric light, in the cold weather: the average is about 13 hours daily. The woollen mill works, on an average, 10 hours and 20 minutes only, the actual hours varying from 11¾ in the hot weather to 9¼ in the cold weather.

Lucknow. The actual working day is 13¾ hours.

Calcutta. The system of working varies in each *cotton* mill inspected. Speaking generally, the tendency is to have a late start, and to work the mill continuously, from start to finish, without giving the half-hour interval prescribed by law. One mill works a 10-hour day only, from 8 A.M. to 6 P.M.; another works the spinning department for 12 hours continuously from 7-30 A.M. to 7-30 P.M., the weavers working from 6 A.M. to 7-30 P.M.; a third mill works daylight hours only, without the

midday interval; a fourth works from 8 A.M. to 8-30 P.M., also without an interval; and a fifth from 5 A.M. to 8 P.M., with an interval of 2 hours in the middle of the day. In the cotton mills of Bengal, as in the jute mills there, the hours of work are largely determined by the fact that, where Bengali workmen are employed, an interval of at least one and a half hours, and preferably two hours, must be given in order to enable them to cook their food. Differing in this respect from the operatives in other textile centres, they will not eat cooked food brought to the mill.

The *jute* mills are worked upon a system peculiar to Calcutta, and somewhat difficult to explain in detail. All the mills work, nominally, from 5 A.M. to 8 P.M. without stoppage; but it is admitted that in certain mills constant endeavours are made, when the conditions of the labour market permit of this, to "crib time," and in such cases the factory may run from 4-30 A.M. to 8-30 P.M. The workers, except in the weaving and sewing departments, are divided into a number of shifts, the hours of work of each shift being arranged so that each worker has an interval of at least two hours—or else is entirely free—at the time when he takes his principal meal. Where no long interval is given—*i.e.*, where the worker eats his food before beginning work, or after finishing it—each operative has a rest interval of half an hour or so during the term of his shift. The shifts are so arranged that no operative works more than 11 hours a day. We ascertained by careful inquiry that these shifts, though complicated at first sight, are understood by the operatives and are actually carried out. The system will be comprehended from the diagram appended, showing the hours of work for all the adult shifts, in departments other than weaving and sewing, of a typical mill :—



The weavers on the other hand are invariably on duty for the full number of hours during which the mill runs. It is the custom, however, to arrange that in the case of broad looms there shall be 5 weavers for each set of 4 looms; the extra hand is in some cases engaged by the mill, in others he is engaged by the 4 weavers themselves, who pay him a monthly wage, and take from the mill the usual piece-work rate for his production. With narrow looms the 4 men on 4 adjoining looms

form themselves into a set, and arrange times of relief among themselves. The weavers must, however, all be present at the opening and closing of the mill; and they are therefore on duty ordinarily for 15 hours a day, or where "time-cribbing" is resorted to, their actual employment may extend to 16 hours a day. No regular midday interval is given in any of the jute mills, and the machinery is never stopped between the starting and closing times.

Madras Town.

Daylight hours only are worked, but the full period of daylight is not utilized in all cases. The usual hours are from 6 A.M. to 6 P.M. in the cold season; and from 5-30 A.M. to 7 P.M. in the hot weather. The two largest mills work, on an average, about 11 hours a day only throughout the year; their longest day does not exceed 11½ hours.

Madras Presidency.

All the mills inspected work daylight hours only, the longest day being from 5-45 A.M. to 6-45 P.M., and the shortest from 6 A.M. to 6 P.M. In no case do the longest hours exceed 12½, and generally the hot weather day does not exceed 12 hours.

Sholapur.

The hours are from dawn to 7-30 P.M., or from 6 A.M., fixed, to 7-30 P.M. In the former case the working hours average about 12½ for the shortest days, and 13½ for the hot weather months. A few years ago, about 1898, two of the mills worked very long hours—from 5 A.M. to 8 P.M., sometimes to 9 P.M., giving in the latter case 15½ hours of actual work.

The Central Provinces.

All the mills visited work daylight hours only. The average working time for the whole year is approximately 12 hours 3 minutes and the longest day in any mill was from 5-25 A.M. to 7-20 P.M.—giving 13 hours 25 minutes' actual work. The shortest working day is approximately 11 hours.

The Punjab.

In Delhi very long hours are worked. Electric light is not usually employed during the hot weather, but in the cold season the mills actually work 13½, 14, or even 14½ hours a day, beginning as early as 6 A.M., and stopping as late as 9-30 P.M. The hot weather hours are usually from 5 A.M. to about 7-30 P.M. Some mills give an interval of one hour, others an interval of half an hour or three quarters of an hour. The midday interval of one hour is peculiar to the Punjab. In Amritsar and Lahore the actual working hours vary from 11½ to 13 in the cold weather, and average 13¾ in the hot season. In Amritsar the longest interval over which the working hours are spread is from 5-10 A.M. to 7-30 P.M.; in Lahore one mill works similar hours, but the other occasionally works up to 9 P.M., and has an average 13-hour actual working day throughout the cold season. The Dhariwal Woollen Mill works, on an average, only 9½ hours (actual) in winter, and 11½ hours in the hot weather.

Summary of the preceding paragraph.

12. To recapitulate, in mills working *daylight hours* the average working time for the whole year is approximately 12 hours and 5 minutes; the longest day does not usually exceed 13½ hours' actual work, and the shortest day is about 11 hours.

In the mills fitted with *electric light* in Bombay island, the hours worked vary from 13 to 13½ a day; in Ahmedabad similar hours are worked, the tendency being to prolong the time if possible, and in one mill which we visited the operatives are sometimes worked for over 14 hours a day. A case where the hours were extended to 14¾ is on record. In Broach work occasionally goes on up to 14½ hours a day. The Agra hours are from 13¾ as a minimum to 15¼ as a maximum; in Hathras they are only one hour less. In Lucknow the actual working day is 13¾ hours. In the Calcutta jute mills the weavers are on duty for 15 hours, and this is, in some cases, extended to 15½ or 16 hours. In Sholapur the hours range from 12½ to 13½; in Delhi they are from 13½ to 14½ a day. In Amritsar and Lahore the hours average 13¾ in the hot season, and in some cases amount to 13 hours throughout the cold weather. These are the conditions which prevail at present. But formerly the Bombay mills fitted with electric light regularly worked from 5 A.M. to 8 P.M., or 14½ actual working hours, this being, in some cases extended to 15 actual working hours. Similarly in Sholapur the mills were on occasion run for 15½ actual working hours. It is to be remembered that, in all these cases, the mills were not worked on the shift system.

Hours of work in seasonal factories.

13. The only seasonal factories where excessive hours are worked are ginning and rice mills. In the former class there is in general very inadequate supervision; the arrangements are usually of a primitive character; and it is not infrequently the custom to leave the provision of the labour force, which consists chiefly of women, entirely in the hands of contractors, who are paid so much *per* unit of cotton ginned. Speaking generally, it may be said that gins usually work for about 12 hours with one set of hands, or for 24 hours with a double shift. At times, the frequency of which depends upon the cotton crop and the popularity of the particular factory, cotton is received for ginning in excess of the quantity which could be ginned in 12 hours, and not sufficient in amount to justify day and night working. In such cases the gins are usually worked for periods up to 15, and in rare cases 18, hours, with one set of hands; but a certain number of additional workers are generally engaged, so that the operatives can have periodical intervals of rest. The practice in this respect varies from place to place; where the gins are under the Act, as in Khandesh, the number of extra hands engaged is always sufficient to bring down the number of hours which each operative must work—assuming that they avail themselves fully of the relief facilities provided—to the number of hours permissible under the Act, or more usually to less than that number. In other centres the number of extra hands employed is not accurately calculated; and the hours actually worked by the women may be greatly in excess of

11 hours. In factories not under the Act it is a common practice to work women nominally for as long as 18 hours, allowing them to make their own arrangements for relief by other members of their families. The period of high pressure probably does not extend beyond a month, or a month and a half at the most.

In the rice mills, for reasons identical with those explained above as regards gins, working is also spasmodic in character at certain periods of the year. The mills usually work for about half the year only; out of the six months' season, a mill will probably work from 6 A.M. to 6 P.M. for about 3½ months; from 6 A.M. to 10 P.M., with one set of hands—or in some cases with two shifts—for about one month; and all day and night, with double shifts, for the remaining period of 1½ months. As it is the custom in Burma to give each worker an interval of an hour and a half during the course of the day, and, when working late, a second interval of half-an-hour about 6 P.M., an operative in a rice mill working with a single set of hands for the intermediate 16-hour period would be required to do 14 hours' actual work a day, for about one month or so in each year.

SECTION V.—*Extent to which the present Act is either ignored, or not strictly enforced.*

14. Having stated the results of our observations as to the excessive hours worked in certain factories, we shall now explain the more salient points in respect of which the present law is either ignored, or not strictly enforced. Our inspections have revealed the fact that in some provinces the law is systematically ignored to an extent not hitherto imagined, and it is necessary to set forth in some detail the irregularities and abuses which we have found to exist. It will be convenient to discuss this matter separately in so far as it affects adult males, women, and children, respectively.

Extent to which the present Act is ignored, or not strictly enforced, in the case of adult males

15. The only restrictions which the Act imposes on the employment of adult males relate to the compulsory half-hour interval in the middle of the day, and the grant of a holiday on Sundays. The law prescribing half an hour's interval in the middle of the day is not observed in the Calcutta jute mills, in so far as the weavers are concerned; it is not observed in the cotton mills there; and it is generally disregarded in rice mills, ginning factories, presses and flour mills throughout India. In rice mills the operatives have, as a general rule, an interval of one-and-a-half hours at times suited to the convenience of each; but no definite fixed interval is given, and there is no general cessation of work. In ginning factories male labour is not employed to any large extent; but, whatever class of operatives are engaged, there is seldom a regular interval during which the gin stops. The usual practice is to run the machinery continuously until a stoppage becomes necessary for mechanical reasons, but it is customary to entertain a sufficient number of additional hands to permit

of the workers, whether male or female, obtaining intervals of rest at odd times during the course of the day. In presses the work is usually very heavy, and can only be undertaken by men of exceptional physique: no regular interval is given. The men work in gangs—there is no formal shift system—and take intervals of rest as arranged among themselves: they do not, in general, work for more than 8 hours a day. In flour mills no midday interval is usually given; the process is a continuous one, and a stoppage in the middle of the day would not only cause considerable expense, but would also interfere, to a serious extent, with the proper working of the mill.

16. Throughout India, except in Bombay, it is the general custom to call the operatives, or a certain number of them, to clean machinery on Sunday, or on the holiday given in accordance with section 5-B (2) (*b*) of the Act in lieu of Sunday: the work of cleaning lasts from 3 to 5 hours. It is contended that, under the terms of section 5-B, sub-section (2), clause (*a*) of the Act, it is open to the owners to employ the workers generally—and not merely the mechanical staff—in cleaning machinery, without granting a compensatory holiday, inasmuch as the periodical cleaning of machinery is covered by the words "the examination or repair of any machinery." in the section. We are clearly of opinion that this interpretation of the law was never contemplated, and is incorrect. The permission granted under section 5-B (2) (*a*) of the Act is, in our view, limited strictly to cases of *bonâ fide* repair or examination; and we are of opinion that it is a misuse of language to hold that the periodical cleaning of machinery, by the general body of operatives, constitutes either an 'examination' or 'repair' of the mill machinery, in the sense in which these words are used in the Act.

Extent to which the Act is ignored, or not strictly enforced, in the case of women.

17. Experience has shown that the restrictions imposed upon the employment of women by the present Act are suited neither to the operatives themselves, nor to their employers. As a consequence, the provisions of the Act dealing with this subject have been, as a general rule, ignored. In Bombay, for example, the women employed in the reeling and winding departments of the mills come and go as they like; they seldom work for more than 10 hours or so each day; and they do not take the intervals of rest prescribed by the Act. The interval or intervals of 1½ hours prescribed in the case of a full day's work, or the proportionate intervals to be taken in other cases, are found in practice to be too long; the women prefer to come late to their work, and to work continuously, except for short casual absences, for the whole period during which they may wish to remain in the factory on any one day. In ginning factories the women get the same interval as the men, if any interval is in fact given. In factories of this class it is customary to employ a certain percentage of extra hands—the percentage varying from place to place—in order to relieve the workers on the gins. It is claimed that in such cases the women, though they obtain no definite ascertained intervals of rest, do as a matter of fact obtain reliefs which in the aggregate equal or exceed the period

prescribed by the Act. Closely connected with this matter is the allied case where women are employed in gins after 8 P.M., no shifts having been approved. This practice is, of course, contrary to the provisions of section 6(1) of the Act; it is urged, however, that if the number of additional operatives is sufficient to ensure that no woman shall be required to work for more than 11 hours—assuming an equal distribution of work—then the requirements of the law should be considered to have been met. This contention has been accepted in practice by the officials in Khandesh; and in that locality gin-owners are permitted to employ women at night if they provide the additional number of hands necessary to bring down each woman's working time, assuming an equal distribution of work among all the hands, to 11 hours. In certain ginning factories, more particularly those least liable to inspection, women are not infrequently worked for over 12 or even 13 hours, and in the ginning factories of Gujarat, which have not yet been brought under the Act, it is stated that women occasionally work as much as 18 hours a day, from start to finish, being relieved at odd intervals by other members of their families. In the sack-sewing sheds in jute mills, women are allowed to come and go as they like, without supervision of any kind over their working hours; and in the winding departments of certain jute mills women are occasionally allowed to work up to 13 hours a day.

Extent to which the Act is ignored, or not strictly enforced, in the case of children.

18. The most serious abuses which have arisen in connection with the neglect to observe the provisions of the existing law relate to the employment of children in textile factories. In the United Provinces generally, except Agra, in the Punjab, in Southern Madras, and in the cotton mills of Bengal, children have as a rule been habitually worked during the whole running hours of the factories, not on the excuse that they were over 14 years of age, but in pure disregard of the law. The importance of this will be more readily appreciated when it is mentioned that the factories which have been illegally employing children in this manner work from 10 to 14 hours a day. This practice often involves what must be regarded as the relatively minor illegality of working children after 8 P.M. In Agra, the Bombay Presidency, the Central Provinces, and Burma the law regulating the hours of employment of children has, as a general rule, been observed; in Agra, however, one set of half-timers in each mill was employed from 1-30 P.M. to 9 P.M.; in Burma a case was discovered where the children had been worked full time up to a date shortly prior to the Commission's visit to that province; in Bombay a few cases were discovered where half-timers, certified as such, were undoubtedly employed on full time; and similar practices were also noticed in the Central Provinces. In Calcutta the children employed in the jute mills are, as a rule, worked in two sets which are employed for 7 and 8 hours respectively, or for 7½ hours each, the object being to secure the attendance of the half-timers for the full period of 15 hours during which the mill runs.

19. The employment of half-timers for the whole day is undoubtedly greatly facilitated by the practice, which is adopted in many

mills, of splitting up the children's sets into two or more working periods, with a long interval between. In Bombay, for example, children are frequently employed in sets working 3 or 3½ hours each, at a stretch, with an interval of the same duration between the working periods. In such cases the children almost invariably remain—in many cases they are required to remain—in the mill compound during the interval; and the temptation to the jobbers to utilize their services, if there is a shortage of labour, is great. Further, apart from practices of this kind of which the owner of the mill is probably not cognizant in many cases, it is indisputable that this "split set" system with long intervals places serious practical difficulties in the way of an inspector. Another custom which facilitates the employment of half-timers in excess of their legal hours of work is the practice of having a school for half-timers inside the mill compound. In many cases, of course, such schools have been opened with the best of motives, and the growth of abuses in connection with the overworking of the children has been carefully guarded against. But in other cases it is equally true that the so-called school has been used solely for the purpose of retaining the children at the mill during the whole working day, in order that this additional supply of labour might be utilized either as a regular measure, or temporarily when occasion demanded. The evidence contains numerous references to this question, both by millowners and officials; and the general opinion undoubtedly is that no school should be permitted within the mill compound. We are entirely in accord with that conclusion. During the course of our tour, we saw frequent instances of the abuse of the system; the "schools" were in many cases held in most unsuitable buildings; frequently no building at all was provided; the children who were supposed to be under instruction were often unable to read or write even the simplest words; no arrangements were made to secure their attendance, though the half-timers are in general not permitted to leave the mill compound; and the teachers were, as a rule, hopelessly incompetent. In one case, for example, a teacher entirely ignorant of English was supposed to be giving instruction in that language.

20. The next abuse which we find to be prevalent in connection with the employment of children is the working of children under 9 years of age as half-timers, and of children under 14 years as full-timers on the excuse that they are over 14. The matter is one to which we devoted special attention in the course of our inspections. In almost every cotton factory visited we had all the children mustered outside for examination by the medical members of the Commission. It was found impossible to adopt the same method in the case of children employed in the jute factories: the numbers involved were so large that they could not be mustered outside without stopping the mill; but careful observations were made of the children both inside the mill premises and as they passed the mill gates after work.

In *cotton factories* a large number of children under 9 years of age are undoubtedly employed as half-timers. In the course of our

inspections of cotton factories in Bombay island we examined 821 children employed as half-timers: with few exceptions these had all been passed as over 9 years by the certifying surgeons; but 113 of them, or about 14 *per cent.*, were, in the opinion of the two medical members of the Commission, under 9 years. Similarly we found 12 *per cent.* of the half-timers examined by us in cotton mills in Madras to be under 9 years of age, 10 *per cent.* in Nagpur, and 7 *per cent.* in Ahmedabad; while of the so-called half-timers, working actually full-time in cotton mills, we found 17 *per cent.* in Calcutta and 15 *per cent.* in Cawnpore to be under 9 years. Of a total of 3,334 half-timers examined by us in cotton factories throughout India, 327, or nearly 10 *per cent.*, were under 9 years of age. Where children are certified prior to employment—as in the Bombay Presidency—the responsibility for this state of things must rest upon the medical officers to whom the work of certifying is entrusted; where it is not the practice to send children for medical examination prior to engaging them, the factory inspectors, and the *ex-officio* inspectors under the Act, must be regarded as responsible. We shall recur to the subject again when discussing the question of the arrangements to be made for the proper certification of children; for the present, we merely wish to state that the provisions of the law in this respect are in practice disregarded or circumvented to an extent which calls for the adoption of adequate remedial measures. The conditions prevailing in the cotton mills, though bad, are very much better than those obtaining in the *jute mills* of Bengal. There children who are obviously under nine years of age, many of them not more than 6 or 7 years old, are employed for seven or eight hours a day, and the proportion of under-age children employed as half-timers probably amounts to 30 or 40 *per cent.* of the total half-timer staff. It was admitted by the manager of one of the larger mills that the proportion of children under nine years of age was probably about 25 *per cent.*; the figure which we have adopted was arrived at after careful observations in many mills, and after watching the operatives file out of the mill gates at the midday change of shifts. We cannot give a statistical basis for our opinion, but may mention that the estimates arrived at by the individual members of the Commission were remarkably close, and point to the conclusion that the figure we have adopted is a fair one.

21. Similar conditions exist, both in cotton mills where half-time sets are worked, and in jute mills, as regards the employment of children under 14 years of age as full-timers. In the *cotton mills* which we visited, we selected for examination 1,057 of the smallest children employed on full-time work as being over 14 years of age, and found that 404 of them were under that age; but as we did not, except in four factories, muster *all* the full timers, no fair percentage can be deduced from these figures. In two Bombay mills, where we mustered all the male operatives, we found that there were 346 full-timers under 16 years of age, and that 64, or 18 *per cent.* of these, were under 14; in a mill at Sholapur, where we held a similar muster, the certification for age had evidently been done much more carefully, as only 6 out of

186 young adults working full-time were under 14 years of age. As regards *jute mills*, we estimate from our observations that approximately 25 *per cent.* of the total number of full-time workers under 17 years of age are children who have not attained 14 years of age. In the case of mills which send children for certification prior to employment, it is obvious that any under-estimates of age made when the child originally began work as a half-timer will be perpetuated; and we have already stated that such under-estimates occur frequently in some centres, notably in Bombay. Full-time workers are in general engaged without medical examination; and, as there is a great demand for young adults to work on the spinning frames, the tendency is to employ all comers who can possibly be regarded as over 14 years. Children working in the mills are also placed on full-time as soon as they are, in the opinion of the overseer or manager, able to work for the whole day. This is due partly to pressure brought to bear by the children themselves, and by their parents; and partly to the fact that children willing to work full-time are a most valuable addition to the labour force of any textile mill, inasmuch as they possess that nimbleness of fingers which is essential for pieceing, and are also of a height which enables them to work at the spinning frames without undue fatigue. The wages earned are high; and the temptation to all concerned to have a half-timer placed on full-time work at the earliest possible moment is very great. The managers of the jute mills in Calcutta readily admitted the existence, if not the extent, of these abuses. One manager stated that he did not send children to the doctor to be certified prior to employment, as he had a shrewd suspicion that most of them would probably be rejected; while another frankly admitted that the mills had made no change whatever in their system consequent on the amendment of the Factory Law in 1891. The system in force prior to that date had, he said, been continued unaltered, and no attention had been paid to the provisions raising the age limits of children from seven to nine, and from twelve to fourteen. The existence of this state of affairs is in itself conclusive evidence that the present system of inspection has, in some provinces, absolutely failed; we shall recur to this subject later, when discussing the arrangements to be made for inspectional work in future.

22. Speaking generally, it may be said that the law as regards the age limits for the employment of children is generally observed in *non-textile* factories. Instances were found where children were employed in such factories, in contravention of the law; but such cases were very rare. This is probably due to the fact that the number of children for whom suitable work can be found in such factories is generally small, and the management can, therefore, devote a larger amount of individual attention to the case of each child employed. Managers can also discriminate among the various applicants for work.

23. The employment of children on full-time, and the working of under-age children, are the most serious abuses regarding child labour which we have discovered. The provisions of the law are also disregarded in other respects, however. It is the custom, for example, in some

mills to allow the children no midday interval unless the hours of work are so arranged that it is convenient, from the point of view of the general working of the factory, to grant them a recess at that time. The children, where they are employed for half-time only, are frequently required to work for seven hours continuously without any interval of rest; and one manager who adopted this system went so far as to claim that it was a sufficient compliance with the law if half an hour's interval were given to the half-timers *before they began work, or after they finished it.* We have already alluded, incidentally, to the employment of children after 8 P.M.; this infraction of the law is common in all cotton mills which work after that hour.

SECTION VI.—*The economic position and the habits of the Indian mill operative.*

The economic position and the habits of the Indian operative.

24. We have now stated the main results of our observations as to the hours of work in Indian factories, the general conditions of labour there, and the extent to which the existing factory legislation is either ignored or evaded. Before explaining our views as to the effect of these conditions on the health of the operatives, and making suggestions for the amendment of the law, we consider it advisable to call attention to the economic position and the habits of the Indian operative, in so far as these are relevant to the questions under discussion.

25. The habits of the Indian factory operative are determined by the fact that he is primarily an agriculturist, or a labourer on the land. In almost all cases his hereditary occupation is agriculture; his home is in the village from which he comes, not in the city in which he labours; his wife and family ordinarily continue to live in that village; he regularly remits a portion of his wages there; and he returns there periodically to look after his affairs, and to obtain rest after the strain of factory life. There is as yet practically no factory population, such as exists in European countries, consisting of a large number of operatives trained from their youth to one particular class of work, and dependent upon employment at that work for their livelihood. It follows that the Indian operative is, in general, independent of factory work, to the extent that he does not rely exclusively upon factory employment in order to obtain a livelihood; at most seasons he can command a wage sufficient to keep him, probably on a somewhat lower scale of comfort, by accepting work on the land; and there are also numerous other avenues of employment, more remunerative than agricultural labour, which are open to every worker in any large industrial centre. If the operative is not merely a landless labourer, he will in general be bound by strong ties to the land and to the village from which he originally came; he can at any time abandon factory life in order to revert to agriculture; and the claims of the village where he has a definite and accepted position are in practice, as experience has shown, sufficiently powerful to recall him from city life for a period

which extends, on the average, to at least a month in each year. The Bombay operative, resident in the Konkan, probably returns to his village for one month each year; and the jute weaver of Bengal, working longer hours and earning higher wages, is not content with less than two or three months. Whenever factory life becomes irksome, the operative can return to his village; there is probably always work of some kind for him there if he wishes it; and in most cases he is secured against want by the joint family system.

The position of the operative has been greatly strengthened by the fact that the supply of factory labour undoubtedly is, and has been, inadequate; and there is, and has been, the keenest competition among employers to secure a full labour supply. These two main causes—the independence of the Indian labourer, owing to the fact that he possesses other and congenial means of earning a livelihood, and the deficient labour supply—govern the whole situation.

26. Inasmuch as the Indian factory operative is not in general a factory operative, pure and simple, he is comparatively unskilled at his work; because his services are indispensable and difficult to obtain, he is, within wide limits, allowed by his employers to perform the work entrusted to him as and how he likes. We have constantly been reminded, during the course of our investigations, of the lack of skill of the operatives; and the numerous comparisons which have been made with the conditions prevailing in Europe place the relative inefficiency of the Indian operative beyond all possibility of doubt. The most accurate comparison of this nature which has been produced before us is that prepared by Mr. C. B. Simpson of Madras (page 313 of the printed evidence); it shows that, taking the whole staff of a cotton spinning and weaving mill, 2·67 hands in an Indian mill are the equivalent of one hand in a Lancashire mill. We have also been impressed with the fact that employers are generally disposed to concede promptly all reasonable demands made by their workers; and, even where the demands made are unreasonable, to treat them as proposals which it is desirable to accede to, if possible. Great nervousness is frequently displayed by employers of labour as to the effect even of trivial changes on the workers; numerous expedients are adopted to conciliate them, and the attitude of the employers throughout appears to be based upon the knowledge that the operatives are in fact the masters of the situation.

But although factory labour in India enjoys this exceptional position, it does not follow that the lot of the factory labourers is an enviable one, or that the labourers always work under satisfactory conditions. The history of the long hours movement in the Bombay mills, for example, suggests that Indian operatives are capable of remaining quiescent under conditions which would probably not be tolerated by a class of similar standing in any other country. The fact that the hours worked were grossly excessive does not appear to have struck the operatives, as a class, until the matter was taken up by the Government and by the press. Further

the history of the movement in Bombay, and of similar movements in other industrial centres, shows clearly that while the operatives fully understand the machinery of local strikes, and have repeatedly forced employers to comply with their demands in isolated cases, they are as yet unable to combine over any large area with the object of securing a common end by concerted action. One of the main difficulties experienced at present, when unrest appears among the workers, is in ascertaining the causes of that unrest. Frequently no definite demands are formulated, no grievances are stated, no indication is given as to the cause of the discontent; the operatives simply leave work in a body, or more commonly they drop off one by one without explanation, and accept employment under more congenial conditions in other factories.

27. The Indian operative is fond of change; he prefers to wander from mill to mill rather than remain settled; and the slightest causes are apparently sufficient to determine him to leave one employer in favour of another. We have found operatives who have travelled from one industrial centre to another throughout the greater part of India; and statistics which we have collected show that the *personnel* of the workers in mills in places so far apart as Bombay, Madras, and Nagpur changes almost completely in about a year and a half, on the average. The inducements to change are occasionally pecuniary, of course; but as a general rule the same rate of pay obtains throughout each centre, and in such cases the motive must be looked for elsewhere.

28. The Indian factory worker is, in general, incapable of prolonged and intense effort; he may work hard for a comparatively short period, but even in such cases the standard attained is much below what would be expected, in similar circumstances, in any European country. His natural inclination is to spread the work he has to do over a long period of time, working in a leisurely manner throughout, and taking intervals of rest whenever he feels disinclined for further exertion. Meals are generally eaten during the working hours of the factory; the midday interval is sometimes devoted to sleep; and the operative leaves his work frequently throughout the day in order to eat, smoke, bathe, and so on. As the result of careful inquiries made throughout our tour, we estimate that in the cotton textile mills in India the average operative probably spends from 1½ to 2 hours each day, in addition to the statutory midday interval, away from his work. Where the pass-out system is in force, the usual limit is 12 *per cent.*, but that system is frequently very laxly enforced owing to the strong disinclination of the Indian factory operative to submit to discipline. Operatives have struck, and forced their employers to give way, when passes up to 15 *per cent.*, or even higher, were granted; the workers demanded the abolition of the pass-out system, and compelled their employers to revert to the old arrangement where each man was allowed to come and go freely. To permit of these temporary absences during working hours, the complement of workers

in an Indian textile factory is always from 10 to 15 *per cent.* in excess of the number of hands actually required to man the machinery at any one time. In addition to these daily intervals, the operative probably takes leave for one month or longer in each year, in order to return to his village. In jute mills, where the operatives in the spinning and preparing departments work on an average 10 hours only, there is not nearly so much loitering; but the hands take a longer holiday—varying from one to three months each year—in order to return to their homes; and the number of workers on leave during the hot weather is frequently so large that the production of the mills falls as much as 25 *per cent.* below the normal.

Facts showing that the Indian operative in a cotton textile factory generally works in a casual manner are to be found on almost every page of the recorded evidence; and we are convinced, from actual observation, that the statements made as to this matter are substantially correct. The operative in a cotton mill is, however, usually called upon to work for excessive hours; and we are disposed to think that there is some causal connection between this fact and the extent to which loitering occurs. As we have already stated, the operatives in the Calcutta jute mills, working short hours by shifts, do not idle away time to anything like the extent observable in Bombay; in engineering shops throughout India, where the hours seldom exceed eight a day, there is very little idling; and in some of the better managed mills, where there is strong European supervision, and the hours do not on the average exceed ten or ten and a half a day, there is little or no idling. In a woollen mill in the United Provinces, working on an average only $10\frac{1}{2}$ hours a day, accurate statistics have been collected for some years, and it was found that on two selected days, one in May and one in November, about 44 *per cent.* of the workmen remained inside the mill during the whole of the working hours; the average operative there does not leave his work for more than half an hour in the day. In Agra, on the other hand, where the operatives come from the same part of the country, but where the working day varies from $13\frac{3}{4}$ to $15\frac{1}{4}$ hours, we were particularly struck with the listless, lazy manner of the operatives, and with the large number loitering about in the compound. Similar comparisons obtruded themselves upon our notice throughout the tour; the system in force at Delhi, for example, compares most unfavourably in this respect with that obtaining at the Empress Mills in Nagpur, or the Buckingham and Carnatic Mills in Madras. We shall deal with this question, from the statistical point of view, when discussing the effect on production of working days of varying length; at this stage it will suffice if we state that the comparisons which we have been enabled to make have convinced us that the Indian operative, while naturally disposed to take work easily, possesses considerable adaptability, and that the length of the day determines to some extent the manner in which he works. Where the hours are short and supervision is good, the operatives can be trained to adopt fairly regular and steady habits of working; where the hours are long and the discipline of the factory is bad, the workers will idle

through the time, and take frequent intervals away from their work. The natural tendency of the Indian operative is to spread his work over a long period, working at it in the most leisurely manner; but that tendency can, we consider, be corrected to some extent by the maintenance of proper discipline, and, as an absolute *sine qua non*, by working the factory for reasonable hours only.

The wages of operatives in textile factories vary from place to place, but are everywhere considerably higher than those earned by the same class of men in other employments. Taking the cotton factories all over India, monthly wages or earnings vary within the following limits:— half-time children from Rs. 2½ to Rs. 4½, full-time boys between 14 and 17 years of age from Rs. 5 to Rs. 13, ordinary hands in the card and frame departments from Rs. 7 to Rs. 18, head spinners (mule) from Rs. 25 to Rs. 35, mule piecers from Rs. 10 to Rs. 16, weavers minding one loom from Rs. 10 to Rs. 15, weavers minding two looms from Rs. 18 to Rs. 35, women (reeling and winding) from Rs. 5 to Rs. 12. The wages in the jute mills are rather higher.

29. The majority of the factory operatives in the larger industrial centres being, as has been stated, only temporarily resident there, the question of their housing has an important bearing on their habits. In Calcutta most of the textile mills have built commodious settlements near the mill premises for large numbers of their operatives; and similar arrangements have been made by several mills in Upper India. In these settlements the workers are comfortably housed at rents which average only 12 annas a room *per* month, and the general opinion, which is supported in the case of one mill by actual statistics, is that the provision of house accommodation undoubtedly renders the labour supply more regular and forms a considerable attraction to new recruits. In Bombay, on the other hand, where available land is scarce, little has been done by the mills in this direction, and the operatives as a rule herd together, for the sake of economy, into large, many-storeyed, barrack-like buildings, called *chawls*, which are provided by private enterprise. The rooms occupied by the mill-hands are in general much over-crowded; there is little privacy, and no home life. The rent of a room 12′ × 10′ × 9′, which frequently accommodates five or six persons, ranges from Rs. 2 to Rs. 3 a month. Workers not accompanied by their families generally board with some other operative who has a female relation living with him; the latter cooks the food for all the men, and takes it to the mill. The general rate for board and lodging, where the boarders with their host and his family share one room, is apparently Rs. 6 a month for an adult and about Rs. 5 for a youth.

30. Working the long hours which prevail in most of the textile factories, and being able, owing to the scarcity of labour, to command a high rate of wages, the average operative earns more than the amount required to keep himself and his family in the standard of comfort to which they have been accustomed. Owing partly to this fact, and partly to the monotonous and wearing nature of the life he leads, he frequently spends a considerable portion of his earnings in drink.

The consumption of liquor among factory workers is, we consider, undoubtedly greater than among men of the same rank in life engaged in other occupations; but we have no reason to think that this points to excessive drinking. Some members of the Commission had frequent opportunities, during the period of their stay in Bombay, of observing the mill operatives in their own quarters, at all hours from the time of the closing of the mills till late at night, and only one or two intoxicated men were seen, out of thousands, during a period of about seven weeks.

31. One of the main difficulties to be contended with in this country by employers of labour is the low standard of living among the workers. As usual, this low standard of living is accompanied by low efficiency; but the chief difficulty in India is that the present standard of living is rising very slowly, and the workmen respond feebly to the ordinary economic impulses which are so effective in European countries. A rise of wages in India may actually diminish the labour supply, in the first instance, in place of increasing it. Many employers of labour contend that a rise in wages, by enabling the workers to earn a larger sum in a given time, results in their absenting themselves from work for longer periods; as their wants are few, and not expansive, the only object to which they can in general apply their savings is to support themselves in idleness; the more they can earn in a given time, the more frequent holidays they take, and the longer they absent themselves from work. We do not entirely support this view; but it seems to us indisputable that it contains a considerable element of truth in present circumstances. Matters are gradually improving in this respect, however; the standard of living is undoubtedly rising all over India, though slowly; and there are some indications that a class of factory operatives, detached from agriculture and village life, and depending largely or solely upon industrial employment, is beginning to be formed.

SECTION VII.—*The effects of the present conditions of employment on the physique of the workers.*

Effects of the present conditions of employment on physique: lack of statistics.

32. In considering the question of the effect of the present conditions of the employment on the physique of the workers, we are met by the initial difficulty that no accurate statistics are available. Every effort was made, during the course of the tour, to obtain definite statistical information on the subject; but it was found that vital statistics in India do not in general differentiate between factory workers and the mass of the population; and records of mortality in factory centres were, from various causes, inconclusive as regards the main object of our enquiries. It was thought that figures of some value might be obtained by weighing operatives in each factory visited, and comparing the results with similar figures obtained from jails throughout India. This procedure was, in the

absence of any other practicable alternative, finally decided upon. In almost all factories visited a number of adult operatives selected as fair average specimens were weighed, and the average weight recorded. The figures so obtained, contrasted with the jail averages, are tabulated in Appendix C.

The general result deducible from these figures is that the factory operatives weigh, on the average, about 8 to 10 pounds less than the average of the jail population between the ages of 20 and 50. The degree of importance to be attached to this result is a difficult question. In the first place, it is impossible to assume that the jail population between the ages of 20 and 50 correctly represents the general average of the population from which the factory operatives are drawn; in the second place, prisoners generally gain in weight in the Indian jails, and it is probable that their average weight considerably exceeds that of the population from which they are drawn; and, in the third place, factory operatives are in some cases not drawn from the provinces in which they work. In view of these considerations we are unable to formulate any definite conclusion from the figures compiled; we have decided to reproduce them in the report, however, as they may possibly prove of some value in the absence of any other statistical information on the subject.

Statistics of relative mortality in Bombay City.

33. In Bombay City, where efforts have for years past been made to obtain accurate mortality returns, it has been found possible to compare the death-rate of factory operatives with that of "general labourers." The statistics have been compiled by Dr. Turner, the Executive Health Officer of the Municipality, and will be found appended to his written evidence. The basis upon which they are framed will be evident from the statement itself, and from Dr. Turner's oral evidence. These statistics show that, comparing the weavers and spinners in the Bombay mills with the dock labourers, general labourers, and domestic servants in that city, the mortality among the mill-hands, year by year over a period of seven years, is considerably less than among the general labourers; the deaths from respiratory diseases are also less; but the death-rate from phthisis is higher. The average mortality *per* thousand of the population for the seven years from 1900 to 1906 is:—

	Phthisis.	Other respiratory diseases.	All causes.
general labourers	2·26	3·55	31·58
factory operatives	2·38	1·88	18·45

The death-rate from phthisis is markedly high, as compared with the low general death-rate of mill operatives. Dr. Turner, who has had a long experience of the conditions prevailing in Bombay, and who was also a member of the Textile Factory Labour Committee, is of opinion that "the factory population is not below the average of the same class as regards physique." He agreed that the statistics which he has furnished show that factory hands are healthier than general labourers, and he assures us that there can be no question as to the

correctness of the total death-rates shown in the statement supplied by him. He considers that, with the exception of phthisis, mill-hands are much less liable to respiratory diseases than general labourers.

Lieutenant-Colonel Mactaggart's views.

34. We have already referred to Lieutenant-Colonel Mactaggart's exceptional qualifications for forming an accurate opinion upon this subject, and would refer to Appendix B, where his views on the question are given in detail. After inspecting with us 57 factories in Bombay, Ahmedabad, and Broach, he "is distinctly of opinion that the physical condition of the factory operatives in Bombay is in every way excellent, and that it compares favourably with that of agricultural labourers, and men of the coolie class generally." With reference to the question of the prevalence of tuberculosis among the mill-hands, he states that "the marked absence of all signs of tubercular disease of glands or joints led me to think that tubercle, in spite of the assertion of one medical witness to the contrary, cannot be common among factory operatives in Bombay." His general conclusion is that "the hours of labour now in force in the Bombay factories have had no bad effect on the health of the operatives"; and he expresses this opinion in the most emphatic manner. In this connection, we would invite attention to the inspection notes recorded regarding mills 43 and 48 in Bombay. At these inspections the whole of the mill operatives employed, approximately 1,500 in number, were mustered for examination. The remarks which we then recorded were as follows:—

> *Mill* 43—889 *adults.*—"The general physique of the operatives was excellent; there was a remarkable absence of skin disease, or other indication of malnutrition. Only one had marks of tuberculosis of glands. The men were a big lot; 60 were weighed, giving an average of 102 pounds."
>
> *Mill* 48—584 *adults.*—"The men, though as a rule slight in build, were in good physical condition; none of them showed any signs of disease of glands or joints, and there was a remarkable absence of skin disease. Weighed 30 adults from the carding and spinning departments—average weight 94 pounds."

These notes were recorded from the joint observations of Lieutenant-Colonel Mactaggart and Dr. Nair.

Evidence of other medical witnesses on the question.

35. The evidence of the medical witnesses on this subject is, as might have been expected, somewhat conflicting. On the whole, however, the majority are of opinion that there is no difference in general health or physique between factory operatives and the average of the population of the same class. A number hold that factory operatives are of better physique, and more healthy, than the non-factory population of the same class; they base this view upon their personal experience of both classes, and contend that the factory operative is generally much better nourished than the non-factory worker, that he is protected to a much greater extent than other labourers from extremes of temperature, and from the enervating effects of constant exposure to the sun. On the other hand, a considerable number of medical witnesses—almost all of whom practise in Bombay—are of opinion that factory operatives are decidedly inferior to the general

population of the same class, both as regards physique, and resisting power to the attacks of disease. They consider that mill-hands are peculiarly liable to phthisis and other respiratory diseases; and that their health has been undermined to a considerable extent owing to the long hours worked, the confinement in an impure and humid atmosphere, and the strain to which they are subjected. The death statistics prepared from the city records are considered inconclusive as it is stated that the mill-hands, when they fall ill, leave Bombay, and proceed to their homes. The absence of old men from the mills—a fact regarding which there can be no doubt—is also quoted in support of the opinion that the hands age prematurely, and become unfit for mill labour at a comparatively early age, returning to their homes with their health impaired, and their constitutions shattered. In considering the weight to be attached to these opinions, it is to be remembered that they are, like the opinions to the contrary effect, entirely unsupported by statistics; and with one or two exceptions, they refer to the mill-hands in Bombay City only. Now the only fairly accurate statistics available on the subject are for Bombay City, and they do not support the views put forward, except as regards the greater liability of the operatives to phthisis. The contention that these statistics are in themselves unreliable is met, more or less completely, by the fact that the death-rate in the Ratnagiri district, from which the Bombay mill operatives are recruited, is one of the lowest in the whole Presidency. These death-rate statistics, though possibly of but little value absolutely, have a relative value which cannot be ignored; and they appear to dispose finally of the contention that the true mortality among mill operatives in Bombay is far in excess of the figures quoted in Dr. Turner's statement.

Our conclusions as to the question of physical deterioration: adult males.

36. We have now given a brief resumé of the statistical information available as regards the physical condition of the factory operatives; we have quoted Lieutenant-Colonel Mactaggart's opinion on the subject; and have summarised the views held by the medical witnesses examined by us. It remains for us to state our own conclusions. Throughout the enquiry, this subject was constantly before us; in every inspection which we made, we carefully examined the general physique of the operatives; and we were constantly on the watch for any signs pointing to the existence of physical deterioration. So long as Lieutenant-Colonel Mactaggart remained with us, he and Dr. Nair, jointly, devoted special attention to this matter; when Lieutenant-Colonel Mactaggart's services were no longer available, the enquiry was continued, upon the same lines, by Dr. Nair and by the Commission as a whole. Despite the constant and careful attention paid to this matter, we did not, during the whole course of our investigations, find any indications of physical deterioration among adult male factory operatives. As regards non-textile factories, we accept this as conclusive, in the absence of any conditions tending to deterioration, and record our opinion that there has been no physical deterioration due to the present conditions of factory employment. Our conclusion in respect of textile factories requires fuller explanation.

37. While admitting that signs of physical deterioration were nowhere observable amongst the adult male operatives of the textile factories visited by us, we consider that the past and present conditions of work in many factories are undoubtedly calculated to cause physical deterioration, owing to the severe strain thrown on the constitution by excessive hours of work in humid and often badly ventilated work-rooms. We also think it possible that, if the life history of a considerable number of the operatives working under these conditions could be traced to its close, there would be evidence of premature exhaustion. We were everywhere struck with the marked absence of elderly men from textile factories, in spite of the fact that the demand for labour is largely in excess of the supply; and we consider that this points to the conclusion that the operative becomes unable to stand the strain of work under present conditions at a comparatively early age.

38. On the other hand, there is the undoubted fact that the Indian operative readily adapts himself to circumstances, and to a great extent counteracts the evil effects of an increase of working hours by idling more while at work. To take one instance, in the cotton mills in Agra, which work very long hours, from daylight to 9 P.M., it was admitted that the amount of loitering among the hands is much greater than in mills working shorter hours, and that more extra hands have therefore to be employed. We made an actual count of the loiterers in the compound of one of the Agra mills, and found that as early as 9 A.M. 15 *per cent.* of the hands were idling outside. We also ascertained that in these mills the European supervisors are allowed to leave work at 5 P.M., and return for a few minutes only to see the mill closed at 9 P.M. Between 5 P.M. and 9 P.M. great slackness prevails in the mill. We have already shown that on an average the worker in an Indian cotton mill spends from 1½ to 2 hours of the actual working day away from his work. In addition to these daily intervals, each operative generally takes two or three days holiday each month, and an annual holiday which may extend to from one to three months. In order to obtain accurate information on this subject, the books of two representative mills in Bombay, belonging to different owners, were, through the courtesy of the managing agents, scrutinised in detail by one of the members of the Commission. The general results are given, in tabular form, below:—

Average absence per *operative* per *year, over the three-year period* 1905–06–07.

Department.	*Mill A.*	*Mill B.*
Carding	55 day	s45 days.
Throstle	62 „	51 „
Weaving	72 „	50 „

That is, the average operative may be said to take two days off work every month, and a further annual holiday of from 3 to 7 weeks. In addition, he receives the Sunday holiday, and from four to ten native holidays during the year.

39. Our conclusions regarding the effects of the present conditions of employment on adult males in textile factories may be summarised as follows:—

(*a*) no physical deterioration is observable anywhere among the operatives actually at work;

(*b*) the life history of operatives after they leave factory work cannot be traced, and therefore any subsequent deterioration would not come under our notice;

(*c*) the operatives counteract to a considerable extent, by their leisurely mode of work, the evil results which would naturally follow from excessive hours of work.

(*d*) the very long hours worked in many mills in the past, and in some mills at present, are calculated to produce physical deterioration; if generally adopted or persisted in for any length of time, they would almost certainly result in the physical deterioration of the operatives.

Physical condition of young adult males

40. Little information is obtainable from the medical evidence as to the physical condition of young adults working in factories; but our observations lead us to think that this class—the workers between the ages of 14 and 17, who are employed for the full working time of the factory—are in general in good physical condition, if somewhat undersized. In Madras, the Central Provinces, and the Punjab the young adults are inferior to the standard in other provinces, and are in some cases thin and weakly looking. As no separate registers or statistics relative to this class are kept, and as there is at present nothing to direct special attention to them, we have had to rely exclusively on our own observations in respect of this matter.

Physique of female operatives.

41. The physique of the female workers is uniformly excellent. Writing on this subject Lieutenant-Colonel Mactaggart notes that "the women working in the factories seemed to me to be a particularly healthy lot, and quite capable of working the same hours as I have suggested for young persons." The general trend of the medical evidence is also to the effect that the female workers are of good physique, and are not in any way injuriously affected by their employment in factories. In this connection we would invite a reference to the remarks which have already been made as to the habits of work of these operatives. They come and go as they like, since they are generally on piece-work. In cotton textile factories they are employed almost exclusively in the reeling and winding departments, where they work under exceptionally favourable conditions. The ventilation of these departments is in general excellent; there is no noise or dust; the wages earned are good; and the work imposes no great strain on the operatives. In jute mills women are employed in the preparing, winding, and sewing departments only; the hours worked do not, as a rule, exceed ten; and the hygienic conditions are favourable.

42. The children examined during the course of the tour were in general of poor physique, thin and weakly looking, especially in cotton textile factories. We devoted special attention to this subject, and in almost every cotton factory which we visited we had *all* the children mustered outside for inspection. In jute mills we observed large numbers of children both at work and outside the mills, and found them a rather better lot than those in the cotton mills, but still in many cases weak and poorly developed. Owing to the prevalence of abuses, which have already been discussed fully—the working of half-time children for full time, the employment of children under age, the neglect to give regular intervals, and so on—it is difficult to form a clear idea as to what the effect of the present legal working hours, if faithfully adhered to, would have been on the general health and physique of the children. We are satisfied, however, that the children at present working in the factories are somewhat below the normal standard, although we are unable to say to what extent the abuses which we have mentioned are responsible for this. In Cawnpore and Northern India generally, where the adult mill-hands are as a rule of fine physique, we were specially struck with the poor appearance of the children. There can be no doubt that doffing, even though intermittent, is hard work for a child of 9 years of age; and some relief from present conditions seems to us to be called for in the case of children.

Physique of children.

43. The remarks made as to the general physical condition of the operatives—adult males, young adults, women, and children—do not apply to seasonal factories, where the working period is in general short. The chief seasonal factories are cotton gins, cotton and jute presses, and rice mills. In ginning factories the average season extends to about four or five months; the workers are chiefly middle-aged or old women, drawn from the field-labouring class; and by accepting work in these factories they obtain employment during a time when the demand for field-labour is not great. The work in itself is light; and, owing to the system of daily or weekly payments adopted, the gin-tenders are in a much more independent position than the average factory labourer. If the work proves too hard, or the hours too exhausting, they can leave at once. The gins are occasionally worked, with one set of hands, for periods of from 12 to 18 hours; one set of workers would not, however, usually work for more than 14 or 15 hours, at the most, and during this time they would be allowed to take frequent intervals of rest, which are provided for by engaging a number of additional workers. The period of pressure does not ordinarily exceed one month, or a month and a half, as a maximum. In cotton and jute presses the season is approximately of the same duration. The presses are manned by adult males, and—though occasionally worked for longer periods—the average day does not exceed 12 hours. The men work in gangs, and it is seldom that any individual works for more than 8 hours on any one day. The conditions prevailing in the rice mills have already been described. In all these cases, though periods of pressure occur, they are always short; and no injurious results to the operatives appear to have ensued. In presses

No physical deterioration among employés of seasonal factories.

the men are usually of exceptional physique; they work short hours; and they earn very high wages. In the rice mills the bulk of the labour is imported from Madras; the workers are of exceptionally good physique; and they also earn very high wages. In gins the work is light; the operatives are enabled to maintain themselves at a time when other employment is scarce; and, as in the other cases, the period of pressure is comparatively short. We have no reason to believe that the conditions of employment in these seasonal factories are such as to cause physical deterioration among the operatives.

SECTION VIII.—*Should a direct restriction be placed upon the hours of work of adult male factory operatives?*

Discussion of the proposed restriction of working hours of adults.

44. The question of the imposition of a direct restriction on the working hours of adult male factory operatives is the most important of the various points referred to us, and it will be necessary to discuss it at some length.

In the latter portion of the year 1905 the Bombay mills worked for 14½ hours daily with one set of hands. That state of affairs happily did not continue long in Bombay; but there is no guarantee that it will not recur, and we find it prevailing permanently in the mills at Agra and other industrial centres in Northern India. We consider that it is the duty of Government, on both economic and humanitarian grounds, to prevent the continuance or the recurrence of that system. We are convinced that it is impossible to work men regularly for 14½ hours a day—even in the manner in which Indian operatives admittedly work—without serious permanent injury to their health; and also that any system under which they are required to work for such excessive hours must necessarily be prejudicial not only to them, but also to the industry with which they are connected. Apart altogether from economic grounds, however, it appears to us indisputable that the Government cannot permit a large section of the industrial population to be regularly worked for 14½ hours a day. The evidence which has been recorded shows that in many cases the workers have to walk two or three miles before arriving at the mill in the morning, or after leaving it at night; they are unable to ascertain the time exactly; and in consequence a 15-hour day from start to finish may mean—and in many cases does mean—that the operative is absent from his home for 16 or 17 hours each day. In other words, when working a 15-hour day many operatives can, as a maximum, obtain only seven or eight hours at their homes. In our opinion no further argument is necessary to prove that such a condition of affairs must inevitably lead to the deterioration of the workers; it must also render factory work so unpopular that the labour supply necessary for the adequate development of the industrial resources of the country will not be forthcoming; and the abuse is of so grave a character, so opposed to all humanitarian considerations, and so fraught with serious consequences both to the industrial population, and to Indian industries, that the Government would, in our opinion, be justified in taking any

steps which experience might show to be necessary in order to prevent it from continuing or recurring.

Possibility of the abuses of 1905 recurring.

45. During the course of the examination of the witnesses, we were repeatedly assured that the conditions which obtained in the Bombay mills in 1905 would not again recur. We can find no satisfactory guarantee as to the correctness of this forecast, however. If the market conditions should again become peculiarly favourable, the inevitable tendency will be, if we may judge from the history of the past, to work as long hours as possible in order to take the fullest advantage of a state of affairs which will, *ex hypothesi*, be temporary only, and we consider that no reliance can be placed upon the vague general assurances to the contrary. We have already seen that the Millowners' Association is powerless to enforce any rules of a restrictive character on individual proprietors, while a considerable number of operatives are prepared to work for 15 hours a day, if they can thereby obtain correspondingly higher wages. In these circumstances it appears to us essential that some practical arrangement, which does not in any way depend upon the co-operation of the millowners, must be devised before any security can be felt that the conditions obtaining in 1905 will not be again repeated.

We also believe that the great mass of the workers in textile mills would welcome any measure calculated to prevent their being worked excessive hours in future. In the absence of any direct representations from the workers themselves, we took every opportunity in the course of our tour of questioning the operatives and personally ascertaining their views; and we found them, with few exceptions, strongly opposed to the practice of working excessive hours, and in favour of interference by Government to prevent it. It may be that they hope to be able to force their employers to pay them for a reduced working-day the same wage as they earn now: this will be a matter for settlement between the employers and the employed when the time comes, and we do not anticipate that any serious difficulty will occur in effecting this settlement. But we are convinced that the large majority of workers desire the restriction of hours, even at a sacrifice.

Objections to any direct restriction of hours.

46. The most obvious restriction of this nature is a direct limitation of the working hours of adult males. We would be prepared to recommend the imposition of that restriction, if it were clearly demonstrated that the object in view could not be attained in any other manner. We are satisfied, however, that that is not the case; and we would strongly deprecate any direct limitation of the working hours of adults until all other restrictive measures of a practicable character have been tried, and have been proved inadequate. Firstly, we do not consider that any case has been made out in favour of applying a principle which is admittedly of somewhat doubtful validity, which commands acceptance in very few countries, which is open to the gravest objections from a practical point of view, and which supplies a remedy very much more drastic than the circumstances of the case demand. We are satisfied, as a result

of careful observation and enquiries, that the recommendations which we shall shortly make will, in themselves, be sufficient to prevent the continuance or recurrence of the abuses against which we seek to guard, and in these circumstances we consider it unjustifiable to resort to a measure which has never been accepted in England, and which would undoubtedly cause the gravest inconvenience in practical working.

In the second place, the direct limitation of the working hours of adults would impose on *all* factories a restriction which we find to be required only in textile factories. In no other industry have we found the existence of any abuse, in the matter of excessive working hours, calling for interference, and we are strongly opposed to the imposition of any unnecessary restriction on the employment of labour in factories, especially at a time when the further industrial development of the country is of such vital importance.

In the third place, the strongest practical objections exist to the general enforcement in India of any law rigidly restricting the working hours of adult males. Every effort is, of course, made by factory-owners to systematise working conditions, to make the working hours as uniform as possible, and to prevent the necessity for working overtime. But in all industries overtime is frequently necessary; and we believe that it would be impossible to devise a workable system of exceptions which would give employers the freedom they could legitimately claim, and at the same time secure the general enforcement of the restriction. In France the factory law directly restricting the working hours of men contains numerous exceptions for all the occasions on which overtime may have to be worked in different industries; and previous notice must be given to one of the ninety-one inspectors by an employer desiring to avail himself of any exception. We consider that such a system would be utterly unworkable in India. The area over which factories are scattered in India is so vast, the inspectional staff is necessarily so small, and the employers of labour in the smaller factories are frequently so imperfectly educated, that the system could not be enforced without the gravest injury to Indian industries. Even if the whole field of existing industries could be covered by a list of special exceptions, it is obvious that no provision could be made in advance for the new industries which are springing up, and which it is necessary to foster and encourage in every possible way. Official procedure necessarily involves considerable delay; and it is possible that while the Government was ascertaining the exemptions necessary to enable a new industry to establish itself, that industry might find it impossible to continue the struggle for existence.

In the fourth place, the imposition of a direct restriction on the hours of adult labour would be repugnant to the great majority of capitalists, both in India and abroad, who have invested, or are considering the question of investing, money in India. This is clear from the record of evidence. In the cases where owners of factories have expressed their approval of legislation restricting the hours of work of adult males, it is apparent that they are in favour of that course, not because they consider it advisable in itself, but because

they are impressed by the existence of serious abuses, and see no other practicable alternative which would be effectual in preventing these abuses. Any course calculated to hamper employers in their dealings with their labour force, and to impose serious practical disabilities upon them in the internal management of their works, will certainly be keenly resented. This statement of the case does not, however, exhaust the question. As Sir John Hewett has pointed out in his note, which is printed with the evidence, there is reason to fear that, if legislation is now undertaken to limit the working hours of adult males to 12 or 13 hours, it will not stop there, and attempts will be made in the future—not always suggested merely by the idea of doing justice to the operatives—to restrict still further their working hours. It was impossible to avoid observing the degree of importance attached to this question by English and Indian capitalists throughout India. It would be outside our province to enquire as to the justification for this attitude; but there can be no doubt that the opinion is widely and strongly held that, if interference with adult labour be permitted, pressure will be brought to bear in order to utilize that power of interference in a manner calculated to promote the interests of Lancashire and Dundee, rather than of India. The prevalence of this impression—whether it be right or wrong is, for the purpose of the present discussion, immaterial—would undoubtedly adversely affect India's industrial development.

Summary of our position on the question.

47. We trust that we have made our position in respect of this matter clear. We are strongly opposed to any direct limitation of adult working hours, because we consider that there is no necessity for the adoption of this drastic course, because we are convinced that it would cause the gravest inconvenience to existing industries, most of which have never worked long hours, and because we think that such a measure would seriously hamper the growth of industrial enterprise. We believe that the working of adults for excessive hours in textile factories will be effectively prevented, incidentally, by the measures we propose for restricting the hours of "young persons," women, and children. Had this effective alternative not been available, we are of opinion that direct limitation of the working hours of adults would then have been not only justifiable, but necessary, in order to prevent abuses which the Government could not, upon economic and humanitarian grounds, permit to continue or recur.

SECTION IX.—*The measures on which we rely for an indirect limitation of the working hours of adult males, and the probable effect of these measures.*

The restrictive measures which will lead to a limitation of adult working hours.

48. The measures on which we rely for an indirect restriction of the working hours of adult males to reasonable limits are:—

(1) The formation of a "young persons" class, to comprise all young adults, between the ages of 14 and 17, with working hours limited to 12 in any one day;

(2) the reduction of the working hours of children from 7 hours to 6 hours;

(3) the prohibition of the employment of "young persons," women, and children before 5-30 A.M. or after 7 P.M.;

(4) the substitution of a compulsory interval after six hours' continuous work, in place of the present mid-day interval; and

(5) the assimilation of the restrictions placed upon the employment of women to those proposed for the "young persons" class.

The first four of these measures are the most important; the last is merely of subsidiary importance, in so far as the present question is concerned.

Before discussing the probable effect of these suggested amendments of the law, we desire to lay stress upon the fact that they have not been proposed merely in order to avoid the necessity for the imposition of a direct restriction on the working hours of adult males. That will, we hope, be one of the consequences which will follow from their adoption; but the measures themselves were accepted by us as necessary solely upon their own merits. We shall, in the following sections of the report, discuss these proposals fully, and explain in detail the reasons which appear to us to necessitate their acceptance; for the present, we shall confine our remarks to the probable effect of these measures on the working hours of adult males.

Effect on cotton mills, spinning department.

49. As has already been stated, excessive hours are in general worked in textile factories only; it will not therefore be necessary to discuss the effect of our proposals except as regards these factories. In the cotton spinning mills of Bombay, we have ascertained, by a detailed count in two cases, that approximately 24 *per cent.* of the adult male workers would fall within the "young person" class, if the age limits were fixed at 14 and 16. With the age limits at 14 to 17, as we propose, it may safely be assumed that the number of "young persons" will be approximately 25 *per cent.* of the present total adult male staff in spinning mills, and in the spinning department of spinning and weaving mills. This estimate agrees closely with those given by the majority of the witnesses who were questioned on this point, and with the results of detailed counts made by us in a mill at Hathras (19 *per cent.*) and another at Sholapur (23 *per cent.*). In addition, from 3 to 5 *per cent.* of the staff in spinning mills will be composed of children, employed as doffers: the number is higher in Ahmedabad, where about 12 *per cent.* of the total staff are half-timers: in Bengal the proportion varies from about 10 *per cent.* to 12 *per cent.*: in Madras the average is about 20 *per cent.* It is, we think, a safe estimate to hold that approximately 30 *per cent.*, or say one-third, of the staff in the spinning department will be composed of children and "young persons." That being so, it is clear that the hours fixed for children and young persons will absolutely determine the working hours of the whole department.

The great majority of the witnesses examined agree on this point. In one or two cases it was suggested that a restriction of this character could be overcome by working the children and "young persons" harder during their legal working hours, and giving the male adults a somewhat easier time then, in consideration of their working the mill or department, as the case might be, unaided for the last hour or hour and a half at the close of the day, when the children and "young persons" had left. Such a scheme would not, in our opinion, be successful. Men are not capable of doing doffing work so quickly and expertly as children; and it is very questionable whether they would, in any case, agree to do work which is regarded by them as peculiarly the work of children. Again, adult males are not good piecers; for that, nimbleness of fingers and small stature are essentials. Agreeing in this respect with practically all the managers who have been questioned on the subject, we are convinced that the hours of work fixed for the children and "young persons" would absolutely determine the working hours of all persons employed in cotton spinning.

Effect on cotton mills, weaving department.

50. In the mills which combine spinning and weaving, the percentage of "young persons" and women employed in the weaving and connected departments is not so large. Practically no children are employed in these departments. Actual count in two cases showed that, while only 4 *per cent.* of the hands in the weaving shed were "young persons," the number of women and "young persons" in the weaving, winding, drawing, sizing, and connected departments was in one case 17 *per cent.*, and in the other 25 *per cent.*, of the total hands employed there. The number of protected persons is perhaps not so large that their hours would determine the working hours of the whole department. But the internal arrangements of all spinning and weaving mills are based upon the assumption that the spinning and weaving departments will work for approximately the same hours, or at any rate that the weaving department will not work longer hours than the spinning department; and the machinery in the two departments is in almost all cases driven by the same engine. It would not be economical as a rule to run one department while the other remained idle. Again, the weavers in cotton mills are much more independent than the spinners, a fact which, as regards Bombay, appears clearly from the evidence. They earn higher wages, and they have in many cases refused to work the same hours as the spinners, when they considered these hours too long. We do not believe that any considerable number of weavers could be induced to accept a permanent system under which they would work on at night, after all the spinners had left the mill. Taking all these facts into consideration, we are satisfied that it will be found impracticable to work the weaving department of any cotton textile mill longer than the spinning department. The natural tendency to bring the working hours to a uniform level throughout the mill will be too strong to be resisted.

The restrictions which we suggest as regards the employment of "young persons," women, and children will not, theoretically, be sufficient to force millowners to limit the running time of their mills to 12

hours, inasmuch as it would be possible for them to work the children, women, and "young persons" in shifts spread over the whole period from 5-30 A.M. to 7 P.M., while the adult males worked without being relieved. But we are convinced that this system of shifts would be impossible in cotton mills, both on account of the disorganisation of work which would result from the frequent changes of the operatives, and also because of the scarcity of labour. Further, under the arrangement which we propose for intervals of rest after 6 hours' continuous working, the maximum working hours of adult males in cotton textile mills, which require half timers "young persons" and women as an integral part of their staff, would necessarily be reduced to 12½ hours in any one day. In these circumstances, it is extremely unlikely that owners would arrange to work all the protected classes of operatives in shifts, merely in order to run the mill for half-an-hour longer each day. The loss of production and wastage due to two stoppages in 12½ hours actual running, as against one stoppage in a 12-hour day, would far outweigh any advantages that the former system might otherwise offer.

51. There will, besides, be a strong inducement to owners to adopt a 12-hour day if, as we propose, any millowner declaring for an absolute 12-hour day is relieved of the necessity of having the "young persons" employed in his mill certified for age or registered. We also rely to some extent upon the probable views and wishes of the workers in respect of this matter. With a 12-hour day, the women and children could go to the mill in the morning, with their male relatives; and all the members of a family—except the children on the morning shift—could return together in the evening. In addition to these reasons, we also attach considerable importance to the feeling which will, we consider, grow up among both owners and operatives in favour of an absolute 12-hour day. There is no doubt that a large number of millowners in Bombay are already anxious to revert to a 12-hour day, and we trust that our proposals will assist in crystallising that desire into an established custom.

Probable result of our proposals in jute mills.

52. In jute mills the immediate effect of our proposals will be to limit the running time from 5-30 A.M. to 7 P.M., as these mills cannot be worked without the assistance of the protected workers. The number of children, women, and "young persons" actually employed at present is about 50 or 60 *per cent.* of the whole staff; and the figure will of course be higher if the spinning and preparing departments only are considered. We trust that, as we anticipate in the case of cotton textile mills, the ultimate effect of our proposals may be the adoption of a 12-hour day in all jute mills; but we consider it improbable that this result will be attained at once. The complicated shift system which we have already described is in force in all jute mills, and is thoroughly understood by the workers; it is the practice in these mills to work at present within the permissible limits of time for the employment of women and children; and it appears probable that the existing system will be continued for some time, in order to obtain the maximum possible production. As we have already mentioned, however, no worker in the preparing and spinning departments of a jute mill is at present

employed for more than 11 hours on any one day. In the weaving department the formation of regular shifts, with definitely ascertained intervals, will become necessary, under the proposals which we intend to make, unless the compulsory intervals referred to in paragraph 86 are arranged for; and the probable effect of our recommendations as regards this class of workers will be to limit their actual working hours to 10½ or 11 a day, consequent on the reduction in the running time of the mill from 15 to 13½ hours. We consider it improbable that the looms will be run longer than the spinning and preparing departments, for reasons similar to those which we have already advanced while discussing the question as regards cotton textile mills; and we are disposed to think that owners will prefer to arrange for regular shifts in the weaving department, rather than stop the machinery after each period of six hours.

SECTION X.—*The effect on the production* per *operative in textile factories of working days of varying length, and the probable effect of a general* 12-*hour day.*

The effect of working days of varying length on production.

53. At the beginning of our enquiries, we were of opinion that it would probably be possible to obtain from a large number of textile factories accurate statements showing the effect on the production *per* operative of working days of varying length. The information which we have been able to collect on this subject is, however, of but little value; and a sufficient basis has not in general been given upon which to rest any definite conclusions. The conditions affecting production in Indian textile factories include so many factors, of which the length of the working day is only one, that it is quite impossible to base any opinion of a reliable character upon isolated statistics covering an indeterminate period, such as the majority of the mills have supplied. There is also the further complication that it is the custom, in many cotton mills, to employ a number of additional hands, roughly proportional to the increase in running time, when the mill changes its system and works for longer hours. This practice renders it impossible to obtain comparative figures of any value showing the effect of varying hours of work on the outturn of the operatives in such mills. After close examination of the statements dealing with this question, and of the evidence bearing on it, we have reluctantly come to the conclusion that the greater portion of the material supplied must be discarded as valueless for our purposes. The opinions given are of the most conflicting character, and they are in general based upon insufficient data, and upon a somewhat cursory examination of the question.

Available evidence bearing on the question.

54. The only evidence upon which we can rely is:—

(*a*) a statement, prepared from the records of three jute mills in Calcutta, giving the production statistics for two years when daylight working, and working for long hours by electric light, respectively, were resorted to; and

(*b*) the statements given, and the evidence recorded, as to production in the Buckingham Mills in Madras, the Cawnpore Cotton Mills and Elgin Mills in Cawnpore, and the Empress Mills in Nagpore.

Examination of this material.

55. The statement referred to at (*a*) above is reproduced as Appendix D. The conditions were normal only for the first three months of each year, and the number of operatives remained the same throughout the whole period. Confining the comparison to these months, it appears that a decrease in the working time led to a decrease, but not a proportionate decrease, in production. The actual figures are:—

	Decrease in working time.	Decrease in production.
Mill A	17·24 %	10·80 %
Mill B	17·24 %	5·95 %
Mill C	17·24 %	13·90 %
Average	17·24 %	10·44 %

It is important to remember that the reduction in the length of the working day was made by the owners in all three cases in order to suit their own convenience; the workers were not aware of the reasons which led to a reduction of the working hours; and they were not in a position to form any estimate as to the length of time for which reduced hours would be worked. In view of the experience gained as to this matter in European countries, it is obvious that it would be unfair to accept these results as representing the effect upon production which would probably be produced by reducing the hours of labour to the same extent, either permanently, or after explaining matters to the workers, and fixing a definite time limit for the experiment.

56. A statement is appended to the evidence of Mr. Simpson, of Messrs. Binny & Co., Madras, showing the effect upon production of a 10-hour day in the Buckingham Mills. It was intended to run the mill 10 hours a day only, for a fortnight; but after the expiry of a week the piece-workers asked that the old system of working daylight hours might be reverted to. The figures given show that, while the average production *per* hour in lbs. was 1,116 for yarn, and 1,114 for cloth, during the preceding month, and 1,089 and 1,019, respectively, for the succeeding days of the month in which the experiment was made, it amounted to 1,122 for yarn, and 1,116 for cloth, during the eight days for which the 10-hour day was worked. The increase in production *per* hour was from 2 to 4 *per cent.*, with a decrease in time of approximately 17 *per cent.* The duration of the experiment was, however, so short that very little reliance can be placed on these figures.

The Cawnpore Cotton Mill has adopted a 12-hour day since February 1907, after experimenting as to the most suitable working hours from an economic standpoint. Their experience is that in a 12-hour day they obtain as much production as they formerly did in a 13-hour day. In the opinion of the manager, the workers adapt themselves to the conditions under which they work; where the hours are short, they work

harder and better; where they are long, they dawdle over their work. There has been an increase of one-third of an ounce *per* spindle *per* day in the ring frames in the 12-hour day, as compared with the production in the 13-hour day, though this has been accompanied by a slight drop in the total production of the mules. The piece-workers earn as much in the 12-hour day as they did in the 13-hour day, rates having remained stationary. A statement as to the production of five pairs of mules in this mill, on which the attendance was most regular, is given in No. 96 of the inspection notes, and detailed enquiries which we have since made point to the conclusion that that statement may be accepted as a fair comparative representation of the work done. The gross outturn increased by approximately 8 *per cent.* in the shorter day, and the piece-work wages of the operatives rose in the same proportion. In this mill there is strong European supervision in all departments.

In the case of the Elgin Mills, Cawnpore, the management found that a 15-hour day led to bad work, great waste, and uneconomical working. They reduced the hours gradually to 12, and have been working 12 hours a day for the last eight years. Their experience is that the outturn and the piece-work wages are practically the same now as they were when long hours were worked. The piece-work rates have not been increased, but the earnings of the workers have remained practically stationary.

Mr. Bezanji Dadabhoy, manager of the Empress Mills, Nagpore, has appended to his written evidence certain statements showing the effect on production of working days of varying length. These statements show that, over a period of ten years, the production *per* spindle *per* hour is, on the average, higher the shorter the working day. The difference is not, however, large. The utility of the statistics is materially discounted by the fact that, as the mill works daylight hours only, the short and the long days occur at different seasons of the year, when the spinning conditions are not the same. It is difficult to determine the effect of this on production; but there can be little doubt that, had it been possible to make a comparison for the same period of the year, the difference in favour of the short hour day would have been greater.

57. This evidence points to the conclusion that the production *per* operative *per* hour rises to some extent when the length of the working day is reduced. It is improbable that this increase in the hourly production would ordinarily be sufficient to maintain the gross production at the same figure, if the hours of work were diminished to any material extent; but it is to be remembered that the statistics quoted were in some cases obtained under conditions which were certainly not favourable to any considerable increase in the energy or efficiency of the workers. In two cases only have we definite information as to the results of an experiment, carried out for a sufficiently long period, where the hours of work were deliberately reduced with a view to ascertaining the most suitable working day from an economic point of view. In both cases the results have been the same. It has been found that the 12-hour day is the most suitable, and that the gross

production in a 12-hour day exceeds or equals the production in a 15 or 13-hour day.

We do not desire to lay undue stress upon these results, as we are fully aware of the multiplicity of causes which prevent accurate comparisons being made between the conditions obtaining at different periods of time, or at different places; but we consider that they are entitled to considerable weight when an attempt is being made to forecast the probable effect of the general adoption of a 12-hour day. Our observations have satisfied us that the Indian operative is more adaptable than employers of labour in India have hitherto believed; and we incline to the opinion—though we readily admit that we cannot produce any satisfactory statistical evidence likely to convince others—that the general adoption of a 12-hour day in textile factories in India would not materially reduce the output below that at present obtained in 13 hours. Production would probably fall off at first to a considerable extent; but we believe that this would gradually be rectified, and that within a short time the production under a general 12-hour day would probably equal that now obtained by working for 13 or 13½ hours.

SECTION XI.—*The formation of a "young persons" class, and the restrictions to be placed upon their hours of work.*

Proposal to create a "young persons" class, and the reasons therefor.

58. The summary which we have given of the information collected regarding the hours of work in factories in India shows that young adults are at present frequently called upon to work for excessive hours. In many cases obviously immature adults have been worked for as much as 15 hours a day; and we are satisfied that employment for such excessive hours must necessarily impair the physique, and stunt the development, of this class of workers. As Lieutenant-Colonel Mactaggart has noted, "young persons between 14 and 18 are just those who are likely to suffer permanently from the effects of overwork, even for a limited period. They are also the persons most likely to be driven to working for longer hours than they wish to work, and in any case they are, owing to want of experience, incapable of judging what is good for them." We agree with these views; and consider that, in the present conditions of employment in India, as disclosed in this report, it would be in the highest degree inadvisable to permit the unrestricted liberty which immature adults now enjoy in determining the duration of their hours of labour to continue. It is, we consider, the duty of the State to step in and protect a class which, as experience has shown, is unable to protect itself effectively; and we are convinced that nothing short of a hard and fast limitation of their working hours will suffice. We propose that the new class should include all workers from 14 to 17 years of age, and consider that their total actual working hours should be limited to 12 in any one day. The Hon'ble Mr. Vithaldas Damodher Thackersey differs from the rest of the Commission as to the hour limit, and thinks that the actual working hours of young persons should be limited to 12½, and of children (paragraph 63) to 6¼ hours, a day.

59. The question of the formation of a class of "young persons" has been discussed by the Textile Factory Labour Committee of 1906, and by the Indian Factory Commission of 1890. Sir Hamilton Freer-Smith's Committee objected to the proposal mainly on the ground that it would occasion serious administrative inconvenience in actual working; the Indian Factory Commission of 1890, which was presided over by Surgeon-Major Lethbridge, Inspector-General of Jails in Bengal, was opposed to the creation of a class intermediate between children and full-time workers, on the ground that the members of such a class would be squeezed out of industrial employment if their hours "were restricted by law to any period between full-time and half-time work." In the alternative the Commission was of opinion that these operatives would in fact, and despite the provisions of the law on the subject, be employed either as children, or as adults. That Commission also considered it unnecessary to impose any restrictions as to hours of labour on persons over 14 years, as in India children of that age were frequently beginning to assume the responsibilities of family life. The majority of the witnesses examined by us were opposed to the formation of a "young persons" class, chiefly on the ground that it would occasion serious administrative inconvenience by introducing new complications, and by increasing the burden of responsibility which at present rests on managers. There is reason to believe, however, that the strength of the opposition to the proposal, as disclosed in the record of the evidence, is mainly due to the manner in which the suggestion was presented. The impression produced by the references to this matter in the papers sent to the witnesses apparently was that it was intended to create a class of workers, intermediate between children and adult male workers, fixing for this new class working hours which would not readily fit in with those of the other operatives. There was also the implication that it had become necessary to create such a class, owing to serious and habitual breaches of the law regarding the employment of children. Owners and managers were naturally unwilling to lend any support to such a charge by agreeing to the proposal; and they also dreaded the complicated restrictions regarding registration and medical examination which, on the analogy of the half-timer class, they doubtless assumed would be imposed. In many cases, when it was explained that the Commission did not contemplate the imposition of such restrictions if the factory affected were limited to a 12-hour day, and when it was made clear that the hours of work would fit in with those which we intended to propose for women and children, and with those which we hoped would ultimately be adopted generally for adult male workers, the opposition to the proposal was at once withdrawn.

Objections urged to the "young persons" class.

60. The objections which have been taken on the ground of administrative inconvenience to the creation of a "young persons" class will, we consider, be met to a large extent by the suggestion which we now make. We propose to exempt all factories which undertake to work for not more than 12 hours in each day from the necessity

Replies to these objections.

for registering their "young persons" and of having them certified for age. A factory accepting this concession will render itself liable for employing *any* of its operatives over 12 hours, as if they were "young persons"; but exceptions will be made in favour of the few adults employed in the boiler-house, engine-room, calendering, and other departments who have ordinarily, or occasionally, to come earlier or stay later than the main body of workers. We consider that the concession is one which can safely be offered to factories working not more than 12 hours a day, and also that it will be some inducement to adopt a 12-hour day.

The administrative objections to our proposal will be still further minimised by the adoption of the suggestion that children, who have worked as half-timers, should be permitted to enter the "young persons" class without further medical examination, when the medical certificates obtained by them prior to their admission as half-timers show that they have attained the age of 14 years. In the great majority of cases there will therefore be no medical examination for age prior to admission to the "young persons" class. We also propose that no examination for physical fitness should in any case be made as regards "young persons." As has already been stated, the physique of this class is, on the whole, satisfactory; out of over 1,000 "young persons" specially selected for examination, less than 2½ *per cent.* were considered physically unfit, apart from age; and, as we have explained, the young adults specially selected for examination were picked out from the main body of workers either on account of their apparent youth, or because of their stunted or weakly appearance. In these circumstances, it is apparent that the percentage of children over 14 years of age who are physically unfit to work a 12-hour day must be practically negligible. In view of this fact, and of the practical difficulty of arranging for the medical examination of so large a body of workers, we are of opinion that no examination for physical fitness need be required prior to the employment of "young persons."

The other objection which has been advanced against the proposal to form a "young persons" class is, in our opinion, met by the definition which we propose to give of that class, and by the nature of the restrictions which we suggest as to their employment. It is obvious that a class of operatives working double the hours proposed for children, the same hours as women, and the same hours as the great majority of adults, will not be liable to be squeezed out of the ranks of industrial workers.

61. We have, after careful consideration of the question, decided to advise that all workers from 14 to 17 years of age should be included within the "young persons" class. This decision is based upon the observations made during the course of our tour, when thousands of boys between the ages of 14 and 17 were observed, and nearly two thousand were minutely inspected. We regret that we are unable to agree with the conclusion arrived at by the Indian Factory Commission of 1890, that "Indian boys of 14 are, in the majority of instances, either married or about to be married, and begin to assume the responsibilities of family life." When we began our investigations, we shared

that opinion; it soon became apparent, however, that it was not in accord with the facts, at least in so far as factory operatives as a class are concerned. A thorough physical examination of large numbers of these immature adults was made by us, and we are satisfied that the nubile age of males of this class is considerably higher than the Commission of 1890 assumed. The limits of age which we propose are, in our opinion, suitable. We would point out that one of the main objections taken by the members of the 1890 Commission to any increase in the age limit above 14 years—the objection that "young persons" over that age would either be deprived of employment altogether, or forced to work as half-timers on half pay—is met by the fact that the class of "young persons" which we propose to create will, in the great majority of cases, work the same time as the adult males, and double the working time of the children. We have already explained that there is a special demand for this class of workers in all textile factories; and we see no reason to believe that the restrictions which we propose to place upon their employment will result in any reduction of the wages which they now earn.

SECTION XII.—*Children or half-timers; the age limits to be fixed; and the hours of work to be permitted.*

Age limits for employment of children to remain unaltered.

62. Agreeing in this respect with the great majority of the witnesses examined, we consider that the present age limits for the employment of children need not be altered. Although it is clear that the strain of the present working hours has affected children more severely than any other class, we consider that the proper remedy is to reduce the number of working hours, rather than to increase the age limit. It has repeatedly been pointed out that parents in India desire their children to become wage-earners at the earliest possible moment; there is no question of conscious cruelty, but children are in fact made to work as soon as they are capable of earning even the smallest addition to the family income. In these circumstances, if the minimum age limit for the employment of children in factories were increased, it is inevitable that they would merely be forced to perform other, and probably more laborious, work until they had attained the age qualifying them for factory employment. We see no reason to suggest any alteration in the upper limit of age for half-timers; under our proposals children will, after reaching the age of 14, be protected from the consequences of excessive work until they attain the age of 17 years.

Reduction proposed in their working hours.

63. In view of the results of our investigations as to the physical condition of half-time children employed in factories, we are strongly of opinion that it is necessary to reduce the severe strain under which they at present work. We have explained our reasons for rejecting the suggestion to increase the age limit of this class, and the only practicable alternative which will secure our object is to reduce the number of hours for which they are now permitted to work. It is frequently stated that the children in a textile factory are not

worked hard; that they enjoy numerous intervals of rest; that the work required of them is light and intermittent in character; and that they are not subjected to a strain comparable with that borne by the other workers. We do not entirely agree with these views. In all textile factories it is essential that the doffing should be done as quickly as possible; and the children undoubtedly work hard at each doff. Further, it is naturally the aim of the factory manager to arrange matters so that the children are employed as continuously as possible on doffing work; and, though they are usually alert enough to circumvent these intentions to some extent, yet the work is undoubtedly much more constant than has been supposed. In jute mills the doffing work is very hard while it lasts; all the apparatus dealt with is heavier than in cotton spinning; and the children are urged to the utmost speed, as the spindles fill very quickly, and doffing is much more continuous than in a cotton mill. The doffers in the jute mills work with wonderful rapidity. In cotton mills, though the work is neither so hard nor so continuous as in jute factories, the children work in rooms full of noisy machinery, sometimes badly ventilated, and frequently excessively hot. In our opinion there can be no question that the children employed in textile factories are subjected to a severe strain during their working hours; and we were specially struck with the tired and listless look of the children in factories which we visited at the close of hot working days. In view of the experience which our investigations have enabled us to acquire as to the general physical condition of the half-time operatives, we are of opinion that children over 9 and under 14 years of age should not be permitted to work on any one day for more than 6 hours. In suggesting this period, we have borne in mind the absolute necessity of proposing a limit of time which will fit in with the other limits which we propose as regards the hours of work of "young persons" and women, and with our reasonable anticipations as to the probable hours of employment of adult males. This point, the vital importance of which was strongly emphasised by the Factory Commission of 1890, has not hitherto always been kept in view; but in all cases where it has been lost sight of, the limitations which ignored it have, as a matter of actual practice, been disregarded. The scheme which we propose is not open to that objection. We anticipate that, if our suggestions be adopted, the great majority of textile cotton mills will work a 12-hour day; male adults, women, and "young persons" will then be employed during the whole running time of the mill, while the children will in the majority of cases work continuously for half that period, the sets changing about noon. The present limit of seven hours' work for children was fixed mainly in consideration of the fact that, as all factories worked daylight hours, the maximum working time could not exceed 13½ hours a day; the limit for children was therefore fixed at half that period, allowing one quarter of an hour's margin in order to cover all possible cases. It was not anticipated, however, that children would be worked, on the average, for more than 6 hours a day throughout the year, or for more than 6¾ hours, as a maximum, during any one day, even in the hot weather season. The alteration which we now propose in the legal working

hours of children will give effect to the intentions of the Commission of 1890; and we trust that the administrative arrangements which we propose will be sufficient to secure that the new limit is not evaded or ignored, as the present limitation has been.

SECTION XIII.—*The restrictions to be placed upon the working hours of women.*

64. In a previous portion of this report, we have pointed out that, as the restrictions at present imposed on the employment of women are suited neither to the operatives themselves, nor to their employers, they have been ignored in practice. We have also expressed the opinion that the general physical condition of the female operatives in the various factories visited was uniformly excellent. In these circumstances, and in view of the advantages which would follow from the adoption of this course, we consider that it would be advisable to allow women to work for the same hours as "young persons," *i.e.*, for not more than 12 hours in any one day, with at least one interval during the day. We are satisfied, from our own observations and from the evidence of the medical witnesses examined on the point, that women can work these hours without danger of injury to their health. Lieutenant-Colonel Mactaggart expresses the same opinion as the result of his inspections throughout the Bombay Presidency. The change which we suggest will, if it be adopted in actual practice, tend materially to simplify the organisation of work in most factories employing women; while, if the new conditions should prove distasteful to them, they will still be able to obtain employment in the reeling and winding departments in textile mills, where practically all female workers not engaged in seasonal factories are at present employed. The work there is entirely piece-work; and the women would still be able to come and go freely, as at present. Women can now work for 11 hours, with an interval of 1½ hours, making the total period of employment 12½ hours *per* day; this total period will not necessarily be extended under our proposals. The alternative which we suggest will open a new avenue of employment to women; and, if we may judge from the remarks recorded on this subject by the Indian Factory Commission of 1890, and from our own observations, the measure will be popular with the operatives themselves, and will enable them to recover the position which they held prior to the introduction of the present limitations on their hours of work. Doubts have been expressed as to whether women would in any case work in the preparation, spinning, or weaving departments of a mill alongside male workers; and it has been stated that their form of garment renders their employment in those departments difficult or impossible. Two of the members of the Commission, who have visited Pondicherry, inform us that in the mills there, where women are permitted to work the same hours as the men, a large number are employed on the ring frames: these women work about 12 hours daily throughout the year, and are a robust, healthy-looking lot. Prior to the introduction of the present restrictions, women were also employed to a large extent in the spinning departments of the

Ahmedabad mills. If the removal of these restrictions should lead to the employment of women to a larger extent in textile factories, that will assist in relieving the present scarcity of labour. It will also bind down employers of labour in these factories more closely to the acceptance of a general 12-hour day. It is, however, essential to the success of our proposals that the working hours for women should be identical in all respects with those fixed for "young persons," and that the same intervals of rest should be prescribed. If any divergence be permitted, it would become difficult or impossible to arrange for the employment of women in the departments in which children, "young persons," and adult males are working; and, as formerly happened, they would in practice be excluded from these departments of the factory.

SECTION XIV.—*The limits of time within which "young persons," women, and children should be allowed to work.*

Time limits to be imposed upon the total working period of all protected workers.

65. Women and children are, under the present law, permitted to work between the hours of 5 A.M and 8 P.M.: in the case of women these time limits may be disregarded if a system of employment by shifts is in force, and the arrangements for the working of these shifts are approved by the local inspector. The effect of these provisions upon the operatives is seen most clearly in the case of the Calcutta jute mills. About half the children are required to be at the mill by 5 A.M., and they have frequently to walk two or three miles before arriving there. The following facts were ascertained by us on our visit to a certain jute mill near Calcutta, and are quoted from our inspection notes:—

> "The operatives are mostly Bengalis living in surrounding villages up to 3 or 4 miles off. The first warning whistle is blown at 3 A.M. Enquiry showed that a half-timer, a child of not more than 7 years, selected by the Commission at random, had to leave his home every morning at 4 A.M. and walk 2 miles to the mill."

Children employed in the set which begins work at 5 A.M. are generally free to leave the mill at 3 or 3-30 P.M.; while those employed in the set which works till 8 P.M., the closing hour of the mill, are obliged to attend at 9 A.M. The children therefore must remain in the mill for 10 or 11 hours each day; and they have either to be up very early in the morning, or to remain up till a comparatively late hour at night. The evidence of the workers examined, and the opinions given by the various managers consulted on this subject, show clearly that the necessity for coming to the mill so early as 5 A.M. is regarded by all the workers, adult males, women and children alike, as a serious hardship; and it appears probable that the early start is responsible to a considerable extent for the shortage of labour. The hardships experienced under this system are intensified in some cases owing to the fact that the children and women not infrequently remain in the mill until such time as they can be accompanied to their homes by their male relatives. Popular feeling is strongly against the practice of allowing women to go out alone during the hours of darkness, and in many cases a woman may be compelled to defer her departure from the mill for an hour or two, till her husband or some relative can

accompany her. The period of absence from home may in this manner be extended by one or two hours, while from half an hour to three-quarters of an hour may be spent in walking home from the mill. In this manner the total period of absence may extend to 14 or 14½ hours in the case of children, and possibly to a longer period for some women. We are satisfied that, under the conditions prevailing in India, these long absences from their residences must be detrimental to the health of women, "young persons," and children. The children cannot be properly fed if they or their mothers remain absent from home for 14 hours or so each day; and the strain of the work in the mill must necessarily tell on them more severely if they are obliged to remain in the mill compound for some hours after their legitimate work has been finished.

66. For these reasons we consider that no woman, "young person," or child should be permitted to work except between the hours of 5-30 A.M. and 7 P.M., local mean time. This limitation will, we consider, be effective in checking to a considerable extent the abuses which exist at present owing to the employment of women and children at hours which are not only extremely inconvenient to them, but also injurious to their health. It will protect to some extent all women operatives who have household duties to perform, and will thereby tend to promote the general health of the whole body of workers. And it will also, we anticipate, render work in textile factories more attractive to the protected persons, and so increase the supply of labour. The 1½ hours over and above the 12 hours of actual employment leaves an ample margin for the longest intervals of rest likely to be given in any factory.

67. As an exception to this general rule, we propose that all women and "young persons" employed in *cotton ginning factories* should be permitted to work for 12 hours without any limitation as to the period within which they can be employed. We have already explained the system in force in these factories, the short duration of the busy season, and the character of the employment which they offer. Men are seldom employed on gins; the work is so light that women are peculiarly fitted to undertake it; and, as it has now come to be regarded as a woman's work, difficulty would probably be experienced in getting men to undertake it. The majority of the witnesses examined on this point were of opinion that, if women were prohibited from working on gins at night, it would be difficult, and in some cases impossible, to obtain male labourers to take their place. It is also certain that any such prohibition would not only increase the cost of ginning, but would also diminish the opportunities of employment offered to women. We have pointed out, in a previous section of the report, that ginning factories afford a considerable number of women employment suited to their strength, at a time when these women would find difficulty in obtaining work at their ordinary avocations; and we are opposed to any measure which would withdraw from this class of poor people a congenial and fairly well paid employment. The objections ordinarily advanced to the employment of women at night do not apply with much force to the

case now under discussion. The majority of the women employed in ginning factories are past middle age; and they work, seated, in one room, where male workers only come occasionally. No children are employed inside ginning factories, and infants are very seldom seen there. The physical disadvantages to the younger generation, and the moral objections as regards the employment of the women themselves, are therefore very much less than in the case of any other form of factory labour.

68. We also think that the Imperial Government should have power to permit, in exceptional cases, the employment of "young persons" at night, provided always that they are not employed for more than 12 hours out of the 24. It has never been the practice in Indian textile factories to work day and night with two shifts, as in China and Japan. But it is within the range of possibility that the trade might find it necessary to adopt all-night working in self-defence against foreign competition; and the contingency, remote though it appears to be, ought to be provided for. We would not, however, extend the concession to the employment of either women or children at night.

69. We have proposed that the hours within which it will be permissible to employ women, "young persons," and children in ordinary factories should be fixed at 5-30 A.M. and 7 P.M., *local mean time*. It is evident that if Indian standard time were recognised for the purpose of this provision, there would be wide variations in the actual time of starting and stopping work at different places; for instance, mills at Karachi would start work 90 minutes earlier in the day than those in Calcutta. It will therefore be necessary for each Local Government to fix once for all, for each industrial centre where local time is not officially recognized, the equivalent of 5-30 A.M. and 7 P.M. local mean time in terms of Indian standard time, to the nearest quarter of an hour; we do not recommend a closer approximation. We do not consider that any difficulty will be experienced in giving effect to this in practice.

SECTION XV.—*The arrangements to be made for half-timers' sets.*

The arrangements for half-timers' sets

70. The system upon which children are employed at present varies from factory to factory; in some it is the custom to employ the half-timers in morning and afternoon sets for the full period of seven hours continuously, or with an interval of half an hour only; in others the children are employed on what we call the "split set" system, that is, they work for about half the total time in the morning, and then, after an interval of three hours or so, complete the remaining portion of their seven hours in the afternoon. We have already explained how the latter system lends itself to the evasion of the law. It undoubtedly facilitates the working of children in the same mill for hours far in excess of the legal limit, and for this reason we should have preferred if the system could have been entirely prohibited. But it is actually in force at present in some cotton mills, and in practically all jute mills. We have discussed its working in the former case; in the latter it is

thoroughly understood by the children, and, except in one particular to which we have already referred, it is carried out in a satisfactory manner. The absolute prohibition of the system would practically force jute mills to employ a much larger staff of children, some of whom would work for less than 6 hours a day. We are of opinion, therefore, that the system cannot be entirely disallowed, and recommend that it be permitted subject to the modification explained in the succeeding paragraph.

71. We are satisfied that the reasonable requirements of all the factories concerned would be met by an arrangement under which children could be employed either continuously for 6 hours, or in broken periods not exceeding 6 hours in all, provided always that the total period of employment was comprised within 8½ consecutive hours. This limitation would not interfere with the working of jute mills, and would enable cotton mills adopting the "split set" system to retain it, with slight modifications. Under our proposal, no child need remain on the mill premises for more than 8½ hours in any one day. It is also probable that the opportunity which the system affords of giving an interval of two hours during the period of the child's employment might be utilized by some mills in order to prevent the children from obtaining employment for the second half of the day at another factory. Further, the system could probably be worked so as to give the children an interval of about two hours in which to attend school.

Definition of shifts.

72. Except as regards ginning factories, where the conditions are peculiar and will be discussed in a succeeding section of the report, we consider that all shifts of workers or sets of children must be definitely fixed as regards the hours of work, and the allocation of the workers to definite shifts or sets, before they can be recognized as shifts or sets for the purposes of the law. Unless this condition be insisted upon, it will be impossible in the case of large factories to control effectively the hours of work of any class of operatives, or to detect or punish evasions of the law.

SECTION XVI.—*The certification of children for age and physical fitness.*

The certification of children for age and fitness.

73. The employment of children under nine years of age in factories constitutes one of the most serious abuses which we have discovered. The preceding sections of the report deal fully with this matter, and show the extent to which the practice of employing under-age children obtains. We are strongly of opinion that this wide-spread abuse cannot be effectually prevented unless a hard and fast rule be laid down that no child shall be permitted to work in any factory unless certified to be not under the age of nine years. We are also convinced, as a result of the observations regarding the general health and physique of child workers, which have been dealt with in a preceding section of this report, that an examination for physical fitness is necessary prior to permitting a child to undertake factory work.

Arrangements for procuring certificates.

74. The certificate of age and physical fitness should be obtained from a certifying surgeon appointed for this purpose. Each certifying surgeon should have a fixed office at which he would attend daily, at a stated hour, to examine any persons applying for certificates. He would also visit each mill as often as possible to grant certificates to children assembled there for examination. But besides this, to expedite certification at the mills, the certifying surgeon for each centre should be authorized to approve of any medical practitioner as a *provisional* certifying authority, if he is of opinion that that practitioner can be trusted to carry out the work properly, and that he possesses qualifications sufficient to enable him to pronounce accurate opinions as to the physical fitness and age of children. Provisional certificates should remain in force only until the first visit of the certifying surgeon to the mill in which the child works. In all cases, the provisional certificates granted should be countersigned by the certifying surgeon, after a personal examination of the children at the mill; and if the certifying surgeon refuses to countersign any certificate, the child to whom that certificate was granted should be debarred from working in a factory until a proper certificate of age and fitness has been obtained. We consider that it would be an unnecessary refinement, and that it would occasion serious practical difficulties, to limit the certificates of physical fitness to particular occupations, or to individual factories. The certifying surgeons, where they are appointed solely for this purpose, should in all cases be paid entirely by the Government; they should not be permitted to undertake private practice; and they should be prohibited from receiving any remuneration, direct or indirect, from factory-owners. Where it is impracticable to appoint a special officer solely for this work, it should be undertaken by the Civil Surgeon of the district, or by such other medical officer as the Local Government may appoint. In such cases the certifying surgeon should not be permitted to accept any remuneration from the factory-owners, direct or indirect, in respect of his certifying work. He should be paid for that solely by the Government.

75. We consider that all inconvenience to factory-owners in respect of delay in certification will be obviated by the provision which recognizes the provisional certificate of any approved medical practitioner. The majority of the large mills employ their own medical officers, who attend regularly at the mill each day. In cases where the medical officer of the mill was, in the opinion of the certifying surgeon, a suitable person to whom to entrust the duty of certifying the children provisionally, all candidates for employment could be examined by him each day at the mill. In other cases, it will generally be practicable for the mill-owners to arrange for the attendance of an approved medical man, at times convenient to themselves. We consider that, as regards the larger factories in India, which are situated at four or five industrial centres, it will be possible to arrange matters so that the certifying surgeon will visit each mill once in every seven days. The provisional certificates will, however, remain valid for the period between the certifying surgeon's

visits, in all cases. All provisional certificates granted will be scrutinized by the certifying surgeon, who will re-examine the children; and in this manner an effective check will be maintained over the proceedings of the provisional certifying officers. As the certifying surgeon should have the power to revoke any authority granted to sign these certificates, it is improbable that the system we propose will be abused.

Certificates to be carried by children.

76. We consider that it would greatly facilitate inspection if the certificates of age granted to children were carried by them while at work. At Ahmedabad, and some other places in the Bombay Presidency, the children kept their certificates in small tin cases hung round their necks, and under this arrangement we found that they could be identified with ease and certainty. We would strongly recommend the general adoption of this system, although we do not see our way to prescribe it as a compulsory measure.

Proposal to abolish payment of fees for certificates.

77. We are strongly of opinion that the certifying surgeons solely appointed for this work should receive no remuneration, direct or indirect, from factory-owners. We cannot approve of a system tending to create any bias, however small, in favour of arranging matters in a manner acceptable to millowners. In the case of certifying surgeons not specially appointed for the purpose of certifying children for factory employment, we should have preferred a system under which these officers also would have been absolutely independent of factory-owners. That is, however, impracticable in cases where the certifying surgeon is, as he usually will be, the Civil Surgeon of the district; but even in such cases we are strongly of opinion that no fees for certifying work should be paid to him by employers of labour. We consider that the certifying of children for factory employment should be regarded as one of the ordinary administrative functions of Government; and that, as such, it should be paid for by the Government itself, the 4-anna fee at present charged for each certificate being abolished. Children coming for employment for the first time often have not got the 4 annas to pay, and in such cases there is either delay, or the mill pays the fee and keeps the certificate. The abolition of the fee will simplify matters much, and be received as a welcome concession at a time when the certification of all children is going to be strictly enforced. In any case the certificate should always be considered the absolute property of the child. The question of compensating medical officers for the loss which they would in certain cases sustain under such an arrangement will, we presume, be considered by the Government.

SECTION XVII.—*The application of the Act to ginning and other seasonal factories.*

Proposal to apply the Act to all seasonal factories.

78. Under section 2 of the Indian Factories Act, all factories which work for "less than four months in the whole in any one year" are excluded from its

scope. No definite test period is, however, prescribed; and in consequence different views have been held as to the operation of the words quoted. On the one hand it is contended that, if the factory works for less than 120 days in any one year, it does not come under the Act for that year, and it also remains exempt from the Act until it can be proved to have worked for a longer period, in which case it again becomes subject to the provisions of the Act, but not with retrospective effect. On the other hand it is urged that, if a factory has once come under the Act, it must be presumed that it is likely to work for more than four months in the year until the contrary has been clearly demonstrated; and the factory must remain under the Act until satisfactory evidence covering a reasonable number of years, and warranting its exclusion, has been produced. Difficulties have also been experienced as regards the position of seasonal factories opened for the first time. In such cases there is no evidence either in favour of inclusion or exclusion; and the factory usually works unrestrictedly until definite evidence is obtainable, showing that it has in fact come within the scope of the Act. It is obvious, however, that in all such cases, and in the case of factories excluded from the scope of the Act because they have been shown to have worked for less than four months in one year, the factory will have unrestricted liberty as regards practically the whole of one season's work at least, even if, during that season, it does in fact work for more than four months. These difficulties in the interpretation of the present Act, and inequalities in its operation, occasion considerable trouble to Government officials and to factory-owners. Further, there are obvious objections to having two factories of a similar character, side by side, working precisely the same hours and for the same period, of which one is under the Act, and subject to all the limitations which the Act imposes, while the other is entirely unrestricted.

79. As a result of our investigations, we consider that the seasonal factories which are at present excluded from the Act solely on the ground that they do not work for more than four months in any one year should be made subject to its provisions. These factories are, in general, cotton ginning factories, and they are usually constructed upon the cheapest possible lines. Gins are often erected in poorly constructed buildings; the floor upon which they are supported is frequently so badly constructed that it vibrates to an excessive extent; the machinery and boilers are sometimes bought second-hand; and the management is in many cases unsatisfactory and inefficient. The risk of accident, and the probability of serious abuses being practised, are much greater in such factories than in larger concerns. Their complete freedom from control is also prejudicial to the interests of the larger and better managed factories where sound machinery is used, adequate supervision maintained, and the provisions of the Act are generally observed. We consider it unnecessary to elaborate the arguments in favour of the proposal that the limitation of the scope of the Act to factories working for not less than four months in the year should be abolished, as this amendment of the law was accepted by the Government of India in 1905, after consulting all the Local Governments on

the subject. It will be sufficient to say that the present limitation is indefinite, and difficult to work in practice; that it excludes from all control a class of factories where abuses are peculiarly liable to occur; and that our investigations enable us to say positively that the withdrawal of this limitation will inflict no appreciable hardship upon any industry.

Employment of women at night, and arrangement of shifts in ginning factories.

80. We recommend, however, that the proposals which we have made as regards factories generally should be modified in two respects as regards cotton ginning factories. In the first place, we consider that women and "young persons" should be allowed to work in gins at night. They should, we consider, be allowed to work, by day or by night, for not more than 12 hours out of the 24. We have already given our reasons for this recommendation. In the second place, we propose that in the case of ginning factories running for more than 12 hours a day it should be considered a sufficient compliance with the law limiting the hours of work of women and "young persons" to 12 in any one day if additional workers are employed to the extent necessary to reduce the hours of work of each woman or "young person" to not more than 12 hours, assuming that the work, during the total period for which the factory runs, is uniformly distributed among all the workers. For example, if a factory with 20 gins, for which 20 women would be required for work on the gins, runs for 16 hours, it would be accepted as a sufficient compliance with the law if $\frac{20\times16}{12}$, or 27 women, were actually engaged for work on the gins only. We are of opinion that it would be difficult, and possibly impracticable, to attempt to enforce a definite shift system in such cases. The majority of the ginning factories are small concerns which cannot bear the cost of highly skilled management, and the arrangement of definite, ascertained shifts in such cases would probably be beyond the abilities of the staff. The workers are not accustomed to the shift system, and would not readily understand it; on the other hand, the method of obtaining relief by employing a number of additional workers is familiar to them, and there is no reason to think that it would not in actual practice secure the object aimed at—the restriction of the hours of work of women and "young persons" to not more than 12 on any one day. There is the further point that the system which we propose to allow in this case is not open to the objections which render its adoption absolutely impracticable in larger factories. The ordinary ginning factory is in a small building of one room, and employs only from 50 to 100 hands: in these circumstances inspection is always easy. The system which we propose to sanction has been working in a satisfactory manner in Khandesh for years. Experience there has shown that it is effective and practicable; and in these circumstances we see no reason for refusing to recommend its general adoption in similar cases elsewhere, even although the proposal is open to certain obvious theoretical objections.

The Sunday holiday in ginning factories.

81. A large number of the witnesses examined have suggested that it would materially assist the ginning industry if the factories

were exempted from the necessity of granting the Sunday holiday. The work comes in in rushes; and it is often very inconvenient to close down on Sunday. They would prefer an arrangement under which the factories could close on any four days in the month selected by them. This would admit of cleaning the boilers, overhauling the machinery, and effecting general repairs, without encroaching on the short period available for ginning each year's crop. It appears, however, that the Local Governments have in certain similar cases taken action under section 5-B, sub-section (2), clause (*c*) of the Act; and in these circumstances we see no necessity to make any definite recommendation in respect of this matter. Any doubt which may at present be felt as to the applicability to such cases of the provision quoted will be removed if the wording which we suggest in the draft Bill appended to this report be adopted.

Outside labour in seasonal and other factories.

82. One point which primarily concerns seasonal factories, but which affects other factories also, remains to be noticed. In ginning factories it is the custom for the owners of the cotton sent for ginning to engage workers to stack it in the compound, and to pick it over there, in order to remove the "yellow stain." These workers have nothing to do with the ginning operations, they do not enter the factory proper, and they are in no way under the control of the owner of the factory. Similarly in rice mills the paddy is brought from the boats to the mill by coolies who are engaged solely for this work by the mill, or by a contractor, and who do not enter any portion of the factory where machinery is in operation. The Government of Burma has directed that such workers should not be regarded as within the scope of the Act, and we agree with that view. Although they may, technically speaking, be employed within a factory, their work is not factory work in the ordinary acceptation of that term; and there could be no justificaiton for bringing them within the scope of the Act while dock labourers or agricultural labourers, for example, remained outside its purview. For the same reasons, we consider that the class of workers we have already referred to, who are employed in the compounds of ginning factories, should be excluded from the scope of the Act. Cases of an analogous character occur in practically all factories, and we are of opinion that they should be similarly dealt with.

SECTION XVIII.—*The question of exempting mills working without artificial light from certain restrictions.*

Arguments in favour of a daylight working day.

83. A number of the witnesses examined by us were in favour of what is termed the "natural working day," that is, a day extending from dawn to dusk, and therefore varying in length according to the season of the year and the locality. Most of them were in favour of allowing mills fitted with electric light installations to work a fixed 12-hour day throughout the year, while mills not provided with installations would be allowed to work the natural day. They contended that it is the custom in India to work from dawn to dusk; that the mill hands throughout the country thoroughly understand the system, and that there is no evidence to show that it places

any undue strain on them. Throughout the year, the average length of the working day, under the daylight system, would be less than 12 hours, while in the hot weather the longest day would not exceed 14½ hours (13½ of actual work) in Northern India, or 13¾ hours (12¾ of actual work) in Bombay. It is urged that these hours cannot be considered as in any way excessive, considering the fact that the length of the actual working day in the cold weather would not ordinarily exceed 11 hours.

Objections to the proposal.

84. We have carefully considered this question, and are unable to agree with the arguments advanced. We consider that a system which renders it possible to keep the operatives in or about the mill for 14½ hours, and actually at work for 13½ hours, during the hottest period of the year, and which precludes them from enjoying a single hour of daylight at their homes, throughout the year, except on prescribed holidays, stands self-condemned. The custom of *actually* working labourers for these long hours did not exist in India before textile factories were established. Further, under the system it would be necessary to permit "young persons" to work for the full running time of the mill, while children would be required to work for half that period. We object strongly to any proposal which would admit of children and "young persons" being worked for more than 6 and 12 hours respectively; the children employed in factories are, as a rule, weakly and of poor physique, and we are deliberately of opinion that it would be wrong to impose on them this extra strain at the hottest time of year. We also believe that, so long as daylight hours are worked, little improvement can be expected either in the habits of the workers, or in their efficiency. The hot weather days are so long, and the climatic and other conditions are then so trying, that the operatives naturally dawdle as much as possible over their work; and the habits which these conditions induce and intensify are so much in accord with the natural inclinations of the workers that the tendency is to continue these leisurely methods throughout the year. Another objection to which we attach great importance is that, under the arrangements proposed, it would be possible for many of the operatives to work very long hours during the hot weather, by daylight, and then to accept employment in the cold weather in mills working a fixed 12-hour day by electric light. Large numbers of operatives are always willing to work excessive hours, if they can thereby earn correspondingly higher wages. We are also opposed to the suggestion on administrative grounds; it would in our opinion be almost impossible to work the two systems side by side in the same place.

Examination of the Hon. Mr. Vithaldas' minute of dissent.

85. The Hon'ble Mr. Vithaldas Damodher Thackersey does not agree with our views in respect of this matter, and he has explained his position in a minute of dissent appended to this report.

We have already dealt in the preceding paragraph with some of his arguments; but, as the proposal is put forward mainly in the supposed interests of the manufacturers, without much regard to its

effect on the operatives, we consider it necessary to reply briefly to some of the specific contentions advanced in the minute.

In the first place, we would point out that the opinion of the Factory Commission of 1890 cannot be cited in support of the proposal, inasmuch as the possibility of working a fixed 12-hour day all the year round did not occur to them. Electric light was not introduced in Indian mills until about 1893; and the Commission were not, therefore, in a position to pronounce any opinion as to the relative advantages of the two systems now under discussion, or as to the advisability of permitting these systems to remain in force concurrently. Similar remarks apply to the reference which has been made to the debates in Council in 1891. The introduction of electric light into the mills has entirely altered the aspect of affairs since then; and the conditions have been further modified by the growth of the abuses which we have alluded to in the preceding sections of this report.

It is true that, as our colleague points out, several millowners and managers, who are strongly opposed to excessive hours of work, are nevertheless in favour of the daylight working day. The witnesses who have given evidence in this sense are in general owners or managers of mills not fitted with electric light; and there is reason to believe that their preference for the daylight working day is due, in a great measure, to the fact that they are suspicious and uneasy regarding the probable effects of the general introduction of electric light in mills. Ample grounds to justify this attitude are to be found in our report; but the proposals which we intend to make for improving the administration of the Act will be sufficient to prevent abuses similar to those which have occurred in the past from recurring, and will also afford satisfactory guarantees that the system of working by electric light will be freed from the excesses which have hitherto characterised it.

Mr. Vithaldas next contends that the operatives themselves would prefer daylight working hours to a fixed 12-hour day. The point is, in the last resort, one of individual opinion; but we do not agree that he has correctly represented the views of the majority of the operatives on this question. The President was present on all the occasions on which operatives were questioned regarding this matter while Mr. Vithaldas was not; and the impression left on his mind is that the operatives would prefer a 12-hour day. To the average mill-hand, working by electric light means long hours; and the opposition to long hours is so strong among the operatives that, when they were questioned, any reference to electric lighting was usually drowned in shouts of "We want no electric light." It was extremely difficult to get them to grasp the idea of a fixed 12-hour day all the year round; and more difficult still to get them to accept our assurances that under that system the electric light would be used only for two or three months in the cold weather. Most of them imagine that their only protection against the excessive working hours of the past lies in the entire abolition of electric lighting in mills, and it was in this sense that many of their replies were given.

The argument advanced by our colleague that the operatives will not be worked hard during the long days, as the spinning conditions are then favourable, does not appear to us valid. In the first place, the conditions favourable to spinning do not continue throughout the whole period during which long hours would be worked; in certain parts of the country these conditions do not obtain for more than two or three months. In the second place, as spinning is easy during the rainy months, owners can work on an inferior quality of cotton during that period. The practice is, we understand, common in Bombay; and this would usually counterbalance any advantage which the operatives would otherwise gain owing to the more favourable climatic conditions. Lastly, and most important, we cannot admit that the difference would, even in the most favourable circumstances, be sufficient to counteract the effects of the increased strain thrown on the operatives by the long hours of work during the hottest and most trying months of the year.

We have no information enabling us to chec kthe details of the calculation made regarding the number of mills in India fitted with electric light; but we understand that all mills in Native States have been included in the figures given by Mr. Vithaldas. As regards Southern India generally, the geographical situation is such as to secure what is practically an average 12-hour day, by natural light, throughout the year. Electric light would not be installed in such mills, unless with the deliberate intention of working excessive hours regularly. In Northern India all the mills have electric light. It is clear, therefore, that the question really narrows itself down to one affecting Bombay—the chief cotton centre in India. In Bombay there are 85 mills, and of these 60 at least are already fitted with electric light.

The contention that a refusal to permit factories to work "young persons" and children from dawn to dusk throughout the year would adversely effect industries other than the textile industry is founded upon a mistake in fact. It is true that non-textile factories almost invariably work by natural light; but it is equally true that they do not, in most cases, avail themselves at present of the *full* period of daylight; and our observations have convinced us that the restrictions which we propose will not in any way adversely affect these factories.

Finally, there is a consensus of opinion that, over a whole year of, say, 310 working days, the gross production of a fixed 12-hour day would ultimately be more than that of a natural working day: this opinion is, we understand, held also by the Hon'ble Mr. Vithaldas. We consider that it would be an extremely short-sighted policy to abandon the best interests of both the trade and the operatives merely on account of some temporary inconvenience to a few mills.

Section XIX.—*Minor recommendations.*

Intervals of rest.

86. In the present Act, it is laid down that all factories, except those working on the shift system, must stop work for a full half hour between noon and two o'clock in the afternoon. In place of this we

propose that there shall in all cases be a stoppage of work for not less than half an hour, after not more than 6 hours continuous working. We suggest this amendment as we are convinced that, under the conditions prevailing in India, no operative should be required to work for more than 6 hours continuously. It is, we consider, preferable to place the matter directly upon this basis, rather than to trust as at present to the midday stoppage of work in order to secure that the operatives shall not be continuously employed for too long a period. Operatives have in the past been worked, and in some factories are at present being worked, continuously for 8½ hours without any fixed interval of rest. This ought not, in our opinion, to be permitted. There is another point in favour of the proposal. We find that in few of the textile factories in India is the midday interval used by the work people as their meal hour. Coming to work at daybreak without taking food, the operatives in most factories take their first meal between 8 a.m. and 10 a.m., and generally eat again between 2 p.m. and 4 p.m.; the midday interval is ordinarily spent in smoking, resting, or sleeping in or near the mill compound. We believe that the hands could in many places be kept much more steadily at work if they obtained, instead of the midday rest, one interval of half an hour between 8 a.m. and 10 a.m., and another between 2 p.m. and 4 p.m. This course has been suggested to us by several mill managers, and our proposal makes it possible for any factory to adopt it, while those who prefer to retain the midday stoppage can do so.

The Sunday holiday.

87. The intention of the existing Act was to make Sunday a close holiday for all factories, subject, however, to four provisions designed with the object of avoiding all inconvenience to factory owners. The first provision was intended to permit the supervising and mechanical staff to examine and repair machinery on a Sunday, without imposing on the owners the obligation to give a compensatory holiday in lieu thereof; the second admits of the factory as a whole, or of any individual in the factory, working on Sunday, if a compensatory holiday is given on one of the three days preceding or succeeding the Sunday; the third and fourth provisions enable the Local Governments and the Government of India, respectively, to exempt any factory or class of factories from the necessity for granting the Sunday holiday. As we have explained in paragraph 16 of this report, advantage has been taken of the somewhat wide terms adopted in the first proviso to bring in the whole body of workers, or a considerable proportion of them, to clean machinery on Sundays. In such cases no compensatory holiday is, in fact, given. It is, we think, clear that this practice should be stopped; and we consider that this can best be effected by adding to section 5 B, sub-section (2), clause (*a*) of the Act an explanation to the effect that periodical cleaning is not included in the terms "examining" or "repairing." The second proviso has also worked somewhat unsatisfactorily in practice, inasmuch as it is extremely difficult for an inspector to ascertain whether, when a portion of the ordinary staff is worked on Sunday, compensatory holidays are in fact given to them. As no notice of the intention to work on Sunday is required, and as Sunday working is permissible in anticipation of the grant of a holiday later on in the week, employers can, and do, work

their operatives on Sunday without granting any compensatory holiday, and they run but little risk of detection thereby. In order to prevent this, we recommend that previous notice should be required in all such cases. This will not occasion any inconvenience to factory owners, while it will enable the inspectors to satisfy themselves that the provisions of the law are in fact complied with.

88. Government already has power to exempt, by notification, any factory or class of factories from the necessity for giving a Sunday holiday. We think it would make the Act more complete, and save trouble, to specify in it, in addition, the classes of factories which we have ascertained must *always* be granted the exemption on account of the continuous processes carried on. These are breweries, distilleries, sugar refineries, mineral-oil refineries, ice factories, glass works, tanneries, cement and chemical works, and kilns connected with potteries.

Education.

89. We do not consider that factory owners should be compelled to provide elementary education for the children employed by them. We can see no reason why this particular obligation should be placed upon employers of factory labour only, and we know of no analogous provision in this country which could be cited in support of the proposal. Education is not compulsory in India; and the class from which the child workers employed in the factories are drawn does not, as a rule, take advantage of the educational facilities which are at present offered. Further, as we have already stated, we are most strongly opposed to the maintenance of schools within the factory enclosure. In many cases the mill school is used only in order to keep the children on the premises throughout the day, and they are forced to work—often for the full running hours of the factory—if the labour supply is short.

90. We feel strongly, however, that every facility and encouragement should be given to promote the education of children working in factories. The conditions under which these children live are necessarily such as to prevent them from availing themselves of educational facilities to the extent to which other children can; and in most cases it would be impracticable for the children, however willing they or their parents might be, to obtain any opportunity of attending school. It is hardly necessary to advance any arguments in favour of the suggestion that all possible facilities should be given for the education of this class; and we feel sure that in advocating this we shall command the sympathetic support of the employers of labour in India. The problem must, we consider, be attacked by the educational and local authorities, acting in concert; and we trust that the various Local Governments will bring all the influence which they can to bear in order to secure that the matter is adequately dealt with. The only solution of a practicable character appears to us to be an arrangement under which special schools for factory children would be opened at suitable centres, close to the factories; the course of instruction would have to be repeated twice each day, for the benefit of each set of half-timers, and the school hours would have to be fixed solely with reference to the working

hours of the children in the factories. Arrangements could doubtless be made under which it would be possible for the children to attend school for a maximum of two hours each day. We do not consider that a longer period would be advisable, in view of the facts that the children must necessarily be tired after their work in the factory, and that it is desirable to get them away from the factory, and the factory neighbourhood, at the earliest possible moment. These special schools would probably have to be financed by the local authorities concerned, but we feel confident that the factory owners for the education of whose workers these schools would be maintained would gladly assist in this matter by substantial voluntary contributions.

91. Further, in order to encourage the education of factory children, we propose that any child of 13 years of age, who can produce a certificate showing that he has passed such educational standard as each Local Government may fix from time to time, should be permitted to work as a "young person," if certified as physically fit to work 12 hours a day. This proposal is based on a similar concession given under the English factory law; though it may not be taken advantage of to any great extent at first, we believe that in time it may give some stimulus to education.

Presence of non-working children in factories.

92. The subject of the presence of non-working children in factories naturally falls under two heads:—(*i*) the presence of infants or children too young to be capable of doing work, and (*ii*) the presence of children under the legal working age, who could nevertheless be worked. We are of opinion that children under 6 years would generally fall within the former category, children over 6 years in the latter. As regards the former class—children under 6 years of age—we do not recommend that it should be made an offence to permit such children to remain in a factory. We are satisfied that every effort is at present made by employers to keep women from bringing young children into the factories; in some factories it has been found possible to stop this practice entirely, and we have everywhere found that mill managers do all they can to discourage it. But in a large number of cases it is quite impracticable to prevent it altogether. Many women who earn their livelihood by factory work must either bring their children with them to the factory, or leave them at home practically without care or supervision of any kind. The rooms in which women work are in general well lighted and well ventilated; and it is only in a few exceptional cases that the children who accompany their mothers could come to any harm. As a matter of fact, the information which we have been able to collect on this subject shows that there are extremely few accidents to young children in factories, and in these circumstances we do not think that a case has been made out in favour of an absolute prohibition of the practice. Any attempt to prescribe general rules governing the matter would, we think, fail, inasmuch as it is impossible to cover all the diversities which exist by a set of general rules. The only other alternative would be to leave the matter by law to the discretion of the local inspectors. We are reluctant to adopt that course, partly because

we think that the obligations to be imposed upon factory owners should be as uniform and definite as possible, and partly because we are not inclined, at the present stage, to confer absolute power upon the inspectors in respect of this matter. In all the circumstances, we are of opinion that no action need be taken by the Government to prevent the introduction of non-working children under the age of 6 years into factories.

93. In the case of non-working children over 6 years of age, the dangers to be guarded against are of a different kind. Our inquiries have shown that there is a great scarcity of child-workers in textile factories all over India, and also that under-age children of this class, accompanying their parents to factories, are frequently allowed to work as regular hands, or to help their parents. The inspectors find it almost impossible to prevent this. If an inspector appears, such children stop working, and say they were playing; and no conviction can be obtained unless it can be proved that the child was actually working. The presumption, amounting almost to certainty, is that any such child found in a mill would in fact be engaged as a regular worker; but proof which will satisfy the courts is often unobtainable, and in such cases the law is violated with impunity. In order to prevent this, and to facilitate the work of inspection, we recommend that any child over the age of 6 years, who is found within any room or other part of a factory where manufacturing processes or work incidental to manufacturing processes is carried on, should be deemed to be employed in that factory, unless the contrary can be proved. This provision will not, we are satisfied, occasion any practical inconvenience, while it will materially facilitate the work of inspection.

Fixation of a standard of purity for air in factories.

94. Our observations show that the ventilation in factories, other than cotton textile factories, is in general excellent, and no provisions regarding the purity of the air are required in such cases. In cotton textile factories the conditions in this respect vary widely; speaking generally, the newer mills are admirably ventilated, while the arrangements in the older mills are such that, though ventilating contrivances exist, they are not effective in actual practice. In order to obtain a comfortable degree of warmth in the cold weather, or in order to prevent threads snapping in the hot dry months, or when a dry breeze is blowing, it is the custom in most mills not fitted with modern ventilating arrangements to shut all the windows. In these circumstances the atmosphere of the work rooms soon becomes very vitiated; and it requires no demonstration that continued work in such foul air must necessarily be most injurious to the operatives. We would refer, in this connection, to our inspection notes on mills Nos. 3, 27, 28, and 29. As one witness of long practical experience stated, any man would feel exhausted even if he merely sat in a chair in some of the work rooms for eight or nine hours, the atmosphere was so foul. Others were of opinion that the vitiated air in the mills was largely responsible both for the careless habits of work of the operatives, and for their frequent absences from the work rooms. The conditions in some mills were, they considered, such as to preclude any display

of energy, and to necessitate frequent absences in order to obtain a breath of pure air. Our observations have convinced us that these statements are justified by the conditions obtaining in some cotton textile mills, and we are therefore of opinion that an attempt should be made to fix a standard of purity of air, in order that a reasonable amount of ventilation may be insisted on. Unless a standard of purity be fixed, it will be impossible for the inspectors to effect any improvement in respect of this matter. The standard should, as in England, be expressed in terms of the proportion of carbon dioxide present in the air, and power should be taken in the new Act authorising the Governor-General in Council to prescribe and enforce such a standard. The question of the standard actually to be fixed is one for chemical and medical experts; and we recommend that arrangements should now be made to conduct the experimental work necessary in order to arrive at a decision on this point. We do not consider that the standard adopted in England could be applied, without careful examination as to its suitability, to India.

Fixation of a standard of humidity.

95. Agreeing in this respect with practically every witness examined. we do not consider that any standard of humidity should be fixed for the air in textile mills in this country. The climatic conditions vary so widely over India that the fixation of any standard would, we are satisfied, be impossible in practice.

Fixation of a standard of purity for the water used for humidifying purposes.

96. The water used for humidifying purposes is, in general, taken from the municipal water-supply. In other cases it is usually drawn from sufficiently pure sources; but we have found several instances where the water used for this purpose was taken from stagnant, foul-smelling tanks, and was obviously most impure. We consider that it will be possible to rectify this, while at the same time imposing no burden upon the factories which have at present a supply of reasonably pure water, by requiring that in all cases where humidity of the air is produced by artificial means, the water used for the purpose must be taken either from a public supply of drinking water, or from some other source of supply ordinarily used for drinking purposes. If it is not obtained from such sources, then the water used must first be purified to the satisfaction of the inspector. This will cover all cases, even those of factories situated in the most isolated places.

Measures to be taken to protect the workers from inhaling dust or other impurities

97. We have found that in several classes of factories, more particularly cotton presses, rice-mills, flour mills, and paper mills, theamount of solid impurities in the atmosphere is so large as to cause serious danger to the health of the operatives. In many cases the dust was so bad that we could hardly enter the work-rooms. In some of the better managed factories mechanical appliances have been used which entirely obviate this danger, and there is no reason why such appliances should not be insisted on wherever they are needed. We recommend that power should be taken in the new Act to require the owner of any factory where dust or other impurities are likely to be inhaled by the workers, and where this could probably be prevented, to take such means

of a mechanical character as the inspector may direct in order to prevent such inhalation. The circumstances are, we think, such as to justify fully the application of this remedy. An appeal against any order of this nature passed by an inspector should, we think, lie to such authority as each Local Government may prescribe.

Latrine accommodation.

98. Throughout our tour, we directed special attention to the question of the adequacy of the ordinary scale of latrine accommodation, which is one seat for every 50 workers. We are satisfied that that scale is, in general, adequate. Men were seldom seen waiting outside the latrines, and no complaints were made as to the inadequacy of the accommodation provided. The scale is, however, inadequate in the case of the smaller factories where the number of workers does not exceed about 200. In order to provide for this, we recommend that the following scale should be prescribed for general adoption:—

up to 50 operatives ..	.. 3 seats.
from 51 to 150 operatives ..	.. 4 seats.
from 151 to 200 operatives ..	.. 5 seats.
above this number.....one seat for every 50, or fraction of 50.	

Where latrines are provided on the septic-tank or water-carriage system, the scale might be reduced after the first 25 seats. We do not consider that the provision of separate urinal accommodation should be insisted on. The habits of the native in this respect are different from those of the European; and it has been found that urinals, where provided, have frequently not been used in the manner intended. The provision of separate urinal accommodation would, in general, probably be of but little benefit to the workers.

Fencing of machinery.

99. The arrangements for the fencing of machinery are, in the great majority of cases, excellent. We do not consider that any powers in excess of those conferred by the present Act are necessary as regards this matter.

The provision of fire exits.

100. In many factories no adequate provision is made for the escape of the operatives from the upper storeys in case of fire. There is frequently only one staircase to the upper storeys, which serves both as entrance and exit. These staircases are often narrow and steep; and it would be quite impossible in some factories we visited for even a moderately small number of men to escape quickly from the upper storeys of the building. Most factories in India with more than one storey are cotton factories; and, considering the danger of fires occurring there, and the rapidity with which they spread, we regard it as essential that adequate provision should be made for the egress of the workers in case of fire. We therefore recommend that every factory owner should be liable to be called upon to provide adequate facilities for this purpose; and that inspectors should be authorised to serve notices upon occupiers specifying the measures which they consider necessary

in order to effect this, and fixing a period within which these measures must be carried out. An appeal against any order of this nature passed by an inspector should, we think, lie to such authority as each Local Government may prescribe.

Hanging of doors in factories.

101. It has been suggested that all factory doors should be hung so as to open readily outwards. The question is not of much importance in India, as in most factories it is the custom to leave all doors wide open during working hours. We recognise, however, that it is a useful measure of precaution to require that all doors shall, except where sliding doors are used, be hung so as to open readily from the inside outwards; and we recommend that the doors of all rooms where more than 30 workers are at any time employed should, in factories the construction of which was not commenced before the passing of the new Act, be required to be hung in this manner. We do not consider it advisable to give retrospective effect to this provision; but we have no doubt that the majority of factory owners will, on their attention being called to the matter, voluntarily adopt this simple and inexpensive precaution against accidents.

Cotton openers.

102. Machines known as "openers" are used in cotton presses to clean the cotton, and also to mix the various qualities of cotton passed through the machine into one uniform grade. In some cases the machine is used primarily as a cleaner; in others the chief object is to mix the cotton. The opener is of simple construction: a cylinder fitted with projecting spikes of wood, or of iron covered with leather, is made to revolve at a very high speed within a small chamber, provided with a receiving opening at the top, and a delivery opening, extending for the whole length of the chamber, in front. The cotton is pushed by hand into the chamber at the top; catching in the spikes, it is swept round inside the chamber, and ejected with considerable violence from the opening in front. Clouds of dust rise from the cotton as it emerges, unless steam is used in the opener. The machine usually is of a very primitive type; and, as it is used at present, it is a constant source of danger to all the operatives in the press house. In the first place, the air is usually thick with dust beaten out of the cotton; in the second place, stones mixed with the raw cotton are occasionally hurled with great force from the opener among the operatives who work directly in front of it, removing the cotton as it falls; and, lastly, and most important, fires frequently occur owing to the presence of matches in the raw cotton, or to sparks caused by stones or similar bodies coming in contact with exposed portions of the metal work inside the opener. In such cases the fire is almost explosive in its violence, as the air is heavily charged with floating particles of cotton, and the opener is surrounded by large quantities of cotton in a loose fluffy condition. In an instant the whole room is ablaze; after the first flash, however, little difficulty is usually experienced in putting out the fire. It is a remarkable fact that, while a considerable number of women have been burned to death owing to fires occurring in the opener, only three

cases have been traced where male workers have died from this cause. We visited a press house at Nagpur where a fire had recently occurred, resulting in the death of two women. Four females were working in front of the opener when the fire broke out, along with a considerable number of men. All the men escaped without injury; when the fire was put out a few minutes later, two of the women were found dead, lying on heaps of cotton to one side of the opener. They were not seriously burned, and in the opinion of the medical officer they had probably died of shock. The room was practically an open shed, on the ground level, with numerous large uncovered openings at every two or three yards' interval. The opener was not more than fifteen feet from a large open door way. We have ascertained that in similar accidents twelve women were burnt to death at Barsi in 1902, and six women at Amalner in 1906.

103. All the accidents due to fires occurring at the opener are of practically the same character. The men generally escape without injury, other than superficial burns; the women, in most cases, are killed. The reasons for this are that the instantaneous flash bewilders the women, they become panic-stricken, and rush into danger while seeking to escape. Further, their form of garment is such that they attract much more cotton fluff than the men, who usually work with no covering but a small loin cloth. This fluff is at once ignited; and, though it probably would not in itself be sufficient to cause any serious injury, yet the feeling that their clothing is on fire still further bewilders and terrifies the female workers. Lastly, the amount of dust and fluff from the cotton thrown out from the opener is so great that the women are said frequently to cover their faces completely, with a portion of their garments, in order to escape the irritation and annoyance which the fluff and dust cause. It is obvious that, in these circumstances, they have but little chance of escape should a fire occur.

104. We are satisfied that the only practicable method which will prevent the recurrence of these deplorable accidents is an absolute prohibition against the employment of women, or female young persons, in that portion of a cotton-press factory in which an opener is at work. Owing to the extremely dangerous character of this machine, we consider that the prohibition should be extended to children also, although children are, as a matter of fact, seldom engaged in any part of a press factory. The enquiries which we have made show that an absolute prohibition of this kind will not occasion any serious inconvenience to the owners of press factories, or interfere with the work there. Women are employed in front of the openers merely in order to beat the cotton, or to render the mixing process still more complete; but they could equally well be replaced by men, and the additional cost would be trifling. The absolute prohibition which we suggest would not, of course, apply to persons working on the feeding side of an opener, where it delivers into another room completely separated off from the feed-room by a partition extending from the floor to the roof. It should also be noted that our proposals do not apply to openers in cotton ginning factories; work in front of these is not dangerous.

Proposal to extend the Act so as to include all factories employing more than 20 and less than 50 operatives.

105. Under section 20 of the present Act, Local Governments are empowered to extend the Act to factories employing not less than 20 persons. This power has been exercised by the Governments of the United Provinces, Burma, and the Punjab, limits suited to the requirements of each province being fixed. In these circumstances we see no advantage in reducing the general limit from 50 to 20 persons. This course would be open to the objection that the Act might thereby be applied in cases where its practical enforcement would be impossible, or extremely difficult: it certainly would considerably increase the work of the inspectors, and might require the appointment of additional men. We have discovered nothing in the course of our tour to lead us to think that any general extension of the Act to these small factories is either necessary or advisable.

Application of the Act to electric power stations.

106. The Government of India referred to us the question whether, if the definition of a "factory" in the present Act were eventually held not to be sufficiently comprehensive to cover electric power stations, these factories should be specifically included in the definition. We consider that this is unnecessary. All necessary precautions for the safety of the workers are already prescribed in the Indian Electricity Act, or in the rules made thereunder; the operatives are of a much superior class to ordinary factory workers; they are in no case overworked; and they do not require protection as against their employers. We understand that the majority of the Local Governments consulted on this subject were also of opinion that it was unnecessary to bring electric power stations under the Factory Act.

Section XX.—*Administration of the Factory Act.*

Present system of inspection.

107. When we find that in Calcutta, the head-quarters of a special factory inspector, from 30 to 40 *per cent.* of the children employed half time in jute factories are under the legal age of 9 years, and 25 *per cent.* of the young full-timers are under the legal age of 14 years; that in 17 out of the 29 cotton factories visited by us outside the Bombay Presidency all the children under 14 years of age are regularly worked the same hours as adults; that factory inspectors admit that they knew of the existence of these abuses, and took no steps to stop them; and that in many factories the provisions of the law for a midday interval and an entire stoppage of work on Sunday are more or less ignored—it is evident that, except at a few centres, the present system of factory inspection has proved a failure. The reason seems to us to be that Government has not appointed a sufficient number of full-time factory inspectors, and has depended too much on a number of *ex-officio* inspectors who have neither the time nor the special knowledge necessary for the work. Our deliberate opinion is that the inspection of large factories by the District Magistrate or the Civil Surgeon is, so far as the enforcement of the Act is concerned, a useless formality which ought to be abandoned. The only part of India in which a fairly

adequate staff of special inspectors has been appointed is the Bombay Presidency, and there the Act is, on the whole, well enforced.

Proposal to increase the number of full-time inspectors.

108. We consider it essential to a proper enforcement of the Act all over India that the staff of full-time inspectors should be at once increased to a strength sufficient to cope with the work of inspecting all the factories in India. The number of such inspectors employed at present for each province, and the number we propose should be entertained, in the first instance, are as follows:—

Province.	Present number.	Proposed number.
Bombay	3	4
Bengal and Eastern Bengal and Assam	1	2
United Provinces	....	1
Madras	1	1
Punjab	....	1
Central Provinces	1	1
Burma	....	1

These recommendations need explanation in some cases:—

Bombay.

The Bombay Government recognise the necessity for an additional inspector, and there can be no doubt that the increasing number of factories in this province requires the services of another man immediately.

Bengal and Eastern Bengal.

The present inspector's charge includes also the factories in the United Provinces: he should be relieved of this part of his duties, and a second inspector should be appointed, the work in Bengal and Eastern Bengal being suitably divided between the two.

United Provinces.

An assistant inspector of factories has, we understand, recently been appointed to this province. We consider there is ample work for one full-time inspector.

Madras.

The present inspector devotes a portion of his time to the inspection of factories in Madras city only, his principal work is that of boiler inspector for the whole Presidency. We consider that one full-time factory inspector, with no other duties, should be appointed and made responsible for all the factories in the Presidency.

Punjab, Central Provinces, and Burma.

The present inspector in the Central Provinces is also boiler-inspector for that province, and has a low-paid assistant. There is no full-time inspector in either Burma or the Punjab. In each of these three provinces, the number of large factories working throughout the year is comparatively small, but there are large numbers of seasonal factories for rice-husking, cotton-ginning, etc. If the inspectors had only duties under the Factory Act, they would not be fully employed during the months when the seasonal factories are shut down. We therefore recommend that they should be also the boiler inspectors for the respective provinces: the inspection of the boilers of the seasonal factories is best undertaken when the factories are shut down, so that their combined duties would be fairly spread over the whole year. If assistance is required in the Central Provinces, the assistant should be merely a boiler-inspector, with no power under the Factory Act, as we are strongly opposed to the grant of authority under the Factory Act to any but responsible men of some position.

Proposal to discontinue inspection by ex-officio inspectors.

109. With the appointment of this staff of full-time inspectors we would entirely do away with the periodical inspection of factories by *ex-officio* inspectors, whether ordinary or medical. We have already alluded to the uselessness of such inspections when performed by district officers, who in most cases know little about the work, and sometimes have never been inside a factory when they are called on to make inspections under the Act. To be of any value, an inspection must be made by an officer thoroughly conversant both with all the provisions of the Act and also with the internal working and arrangements of the mill, and in justice to mill-owners there ought to be uniformity and continuity of policy in carrying out the Act. We received, in the course of our tour, several complaints of unnecessary trouble and confusion caused by the conflicting orders of different *ex-officio* inspectors—orders given by an *ex-officio* inspector were, on his transfer from the district, at once reversed by his successor, and factories were sometimes over-inspected by a number of subordinate officers possessing no practical knowledge of the industries concerned.

110. The periodical inspections by Civil Surgeons and other medical officers appointed joint inspectors under the Act are in our opinion only repetitions of the inspections made by District Officers, and are equally useless. The joint inspector is supposed to give special attention to the employment of children, and the sanitation, ventilation, water-supply, etc., of the factory. These are points which will be looked into by the full-time factory inspector in future, and we see no reason to think that the same ground need be gone over again by a medical man in India, any more than in England. An ordinary inspector is perfectly competent to see that latrines are provided and kept clean, that a sufficient supply of good drinking-water is provided for the mill hands, that the factory is properly ventilated, and so on; while, if our proposals for the certification of children are accepted, an inspector's duty, so far as the employment of children is concerned, will resolve

itself into an examination of their certificates. We see no possible danger in the entire abandonment of these inspections by medical officers; and, on the other hand, we see great advantage in the concentration of the whole responsibility for the inspection of each factory in the hands of one trained inspector.

Appointment and pay of inspectors.

111. The full-time inspectors would, of course, be appointed by the Local Governments as at present. We consider that some Indian experience, if possible of the main industry of the province, and ability to converse with the factory operatives in their own language, are essential qualifications for the appointments. We do not consider it necessary that the inspector should have had previous experience of factory work in England; but we advise that every inspector who has not some experience of factories or factory inspection work in the United Kingdom should, as soon after his appointment as convenient, be allowed to pass three months with a factory inspector there. To secure men of the proper stamp and position we recommend that the salaries of inspectors should commence from Rs. 400 a month or upwards (the initial salary being fixed in each case with reference to the man's qualifications) and should rise by annual increments of Rs. 30 to Rs. 1,000: the salaries to be personal, not graded; the appointments, which should be on probation for the first year, to be made to particular provinces, but the inspectors to be liable to transfer to other provinces should the Local Governments concerned consider transfer advisable: such of the present factory inspectors as are considered suitable should be brought into the scheme at once.

Necessity for uniformity in the administration of the Act.

112. One of the questions referred to us is whether arrangements should be made to secure uniformity in the administration of the Act throughout India. Our opinion is that while nothing should be done to diminish in any way the full authority and responsibility of the Local Governments for the administration of the Act in their respective provinces, it is necessary to take steps to secure some uniformity in the administration throughout India. Wide differences at present exist in the administration of the Act in different parts of India: these have already been set forth at length in the preceding sections of our report, and need not be recapitulated here. We need only record our opinion that, if a fairly uniform enforcement of the Act is to be secured throughout India, something must be done to co-ordinate the policy and work of inspection in the different provinces.

Proposal to appoint a chief inspector of factories in India.

113. For this purpose we recommend the appointment by the Imperial Government of a chief inspector of factories in India. His head-quarters should be in Bombay, but for the greater part of the year he should be on tour, visiting all the factory centres in India at least once a year, and making long halts at places such as Calcutta, where the number of factories is great. His duties should be purely advisory, and he should not, except when specially requested or empowered by a Local Government, exercise any

power under the Act except that of entry and inspection of factories. In respect to factory inspections in each province he should be directly subordinate to the Local Government, corresponding directly with the local secretariat. He should secure uniformity of administration by calling the attention of inspectors to matters in which their inspectional work falls short of his standard. The inspectors should be bound to comply with his directions, but in doubtful cases he should take the orders of the Local Government. In the case of any difference of opinion on a cardinal point between the chief inspector and the Local Government, the latter should refer the matter for the orders of the Imperial Government. The greatest care should be taken to prevent the appointment leading to any centralisation of the administration of the Act in the hands of the Imperial Government: the Local Governments must be left free to administer the Act themselves, as in the past, the only difference being that each of them will have the advice and assistance of the chief inspector in securing uniformity of administration. The post, which must be well paid, will require a man of marked ability and tact, and with Indian experience. If he has not already had experience of factories in the United Kingdom, he should, like the inspector, be given an opportunity of seeing the work of factory inspection there.

Subordination of the inspectors to certain officers.

114. Under the present Act the District Magistrate is an *ex-officio* inspector of all factories in his district. We are of opinion that the arrangement should be continued, not for the purpose of periodical inspection of factories by the District Magistrate, but in order that the full-time inspector may have in each district an official superior who would, when necessary, control his work in that district, and to whom he can turn for advice and assistance. The practice of appointing subordinate officers, such as Assistant Collectors or tahsildars, to be inspectors of factories should, we recommend, be discontinued. In Bombay the work of the full-time inspectors is supervised and controlled by the Collector of Bombay or his covenanted assistant: we consider that the arrangement is a good one, and recommend that in Calcutta and Madras, and, if necessary, in the other provinces as well, the inspectors should be placed under the direct control of similar officers. The system in Madras by which the control of factory inspection throughout the Presidency is given to the Sanitary Engineer does not recommend itself to us.

Certifying surgeons.

115. The arrangements which we propose for the certification of children for age and physical fitness have been detailed in Section XVI of our report. To give effect to these at the principal industrial centres, we consider it essential that at least one full-time certifying surgeon should be appointed for all the factories in Bombay city, another for those in Calcutta and its neighbourhood, and probably a third for the factories in Ahmedabad and other places in Gujarat. In our opinion the work of certification at Bombay and Calcutta is badly done under the present systems: the number of medical officers concerned, the frequent changes of *personnel*, and the different standards adopted for the purpose of

ascertaining ages, all tend to this result. We believe that one special officer could, by carefully arranging his movements, probably visit all the mills in Bombay city once a week for the purpose of certifying the children, under the system we have proposed. Similarly in Calcutta we recommend that, at first, one special officer should be appointed: if it is found in practice that he cannot visit every factory once a week, then the certification of children in some of the outlying factories must be entrusted to the local civil surgeons until such time as a clear case is made out for the appointment of a second full-time officer. For the certifying surgeons in both Bombay and Calcutta, motor cars should be provided to prevent delay in getting about from mill to mill. We are not so convinced as to the absolute necessity for a full-time certifying surgeon in Gujarat, but think that the proposal to appoint one ought to be investigated by the Local Government. It is not, in our opinion, necessary that these special certifying surgeons should be members of the Indian Medical Service: it would probably be better to appoint qualified medical men who do not belong to that service, and who would, therefore, probably continue in the same post for long periods. Where full-time officers have not been appointed, the local Civil Surgeon must continue to be the certifying surgeon.

116. The proposals which we have made as regards the appointment of inspectors and certifying surgeons are necessarily of a tentative character, inasmuch as we are not in possession of sufficient information to warrant us in pronouncing any positive opinion as to the staff required, or as to the detailed arrangements to be made in order to secure proper inspection and adequate facilities for the certification of children. These details must be based upon the results of actual experience acquired as to the working of the system we propose; our specific proposals are in this respect purely of a preliminary character; and we wish it to be clearly understood that any arrangements which experience may show to be required in order to secure adequate inspection and certification should certainly be made.

Section XXI.—*General.*

Draft Bill embodying our proposals.

117. We have considered it advisable to cast our proposals for the amendment of the present law into the form of a draft Bill, embodying in a precise form all the recommendations which we consider necessary (Appendix E). While not claiming for this draft any great accuracy of legal phraseology, we have endeavoured to make it as complete and definite as possible. Objections have been taken to the present Act, both by many of the witnesses who appeared before us, and by the managers of mills which we visited, on the ground that it is too vague, and leaves too much to be dealt with by rules and notifications which managers and others interested in the Act find difficulty in obtaining, and in keeping corrected. We admit the force of the objection, and think that all directions of general application should be included in the Act.

118. We presume that the new Bill will probably be introduced and passed, with such modifications as may eventually be decided upon, during the session of 1908-09. In that case, we advise that the Act should not be brought into force until the 1st April 1910. It is, we consider, necessary to give employers of labour a reasonable time within which to make their arrangements to meet the altered conditions which the new Act will create. The Act will necessitate in some cases changes of a more or less radical character; for instance, factories working only daylight hours at present will, if they desire to work a 12-hour fixed day throughout the year, have to put in electric-light installations. Further, any change of system will probably be resented by a certain section of the mill operatives in India; and it would, we consider, be unduly optimistic to hold that the new Act will be brought into force without some temporary friction. For that reason we attach the greatest importance to its operation beginning at a time when the conditions are such as to diminish, as far as possible, the probability of any serious disorganisation occurring. In April the labour supply is, except in jute mills, normal, and the hours in factories working by daylight are approximately 12 a day. Employers will therefore be in a better position then to meet any unreasonable demands which may be made than they would be at a later period in the year; while, as the working hours will not be decreased in daylight factories, the operatives will probably accept the altered conditions more readily, and may learn to appreciate their advantages before the hot season is over.

Labour laws of Native States in India.

119. Although we consider that the effect of our proposals will ultimately be to improve materially the position of industries in India, yet we are conscious that there will be a transition period during which the disadvantages of the limitations we propose will be felt, while their advantages will not then have become apparent. During this period factories in British India may possibly suffer to some extent from the competition of adjacent factories situated in Native States, and not subject to the restrictions which we desire to impose. This is more especially the case as regards cotton ginning, spinning, and weaving factories. The question is one of considerable practical importance; and we would suggest that the Government of India should consider the advisability of making arrangements under which the conditions in these territories would be assimilated as far as possible in this respect to those obtaining in British India.

120. We regret that Dr. Nair, though agreeing with many of our conclusions and proposals, declines to sign this report; a separate minute by him is appended. This minute, which contains the first complete explanation of his views which we have received, was handed to us when our report was already in print; and we have decided not to comment on it at length. To do so would involve some delay, and would also unduly extend the length of this report, while any reply which was confined merely to the more salient points in the minute would be liable to be misunderstood. We desire to add, however, that, after

considering Dr. Nair's views, we see no reason to alter any of our conclusions or recommendations.

W. T. MORISON.

WILLIAM A. BEAUMONT.

S. M. CHITNAVIS.

A. McROBERT.

J. NICOLL.

VITHALDAS DAMODHER THACKERSEY
(subject to my minute of dissent).

Minute of dissent by the Hon'ble Mr. Vithaldas Damodher Thackersey.

The recommendation of the majority fixing 12 hours as the working day for young persons will, for all practical purposes, bring down the economical working of cotton factories to 12 hours a day. Now, this would affect adversely the large majority of cotton factories which until now stuck to daylight hours and successfully withstood the great temptation to earn larger profits by the introduction of the electric light. Before the practice of working with artificial light became common, no suggestion was ever made from any quarter that the working hours of mills were excessive. On the contrary, evidence from all sides pointed to the fact that the natural light system was best suited to a country like India, not only from the point of view of manufacturers but also from the point of view of the workers. The Factory Commission of 1890, under the Presidentship of such an able and experienced officer as Dr. Lethbridge, and having as a member so zealous a champion of the labourers as the late Mr. S. S. Bengali, examined minutely the whole question of the working hours of the mills. They were assisted in their enquiry by such local representatives and ardent supporters of the interests of the mill-hands as the late Mr. N. M. Lokhandey of Bombay, Mr. Framji Manekji of the United Provinces, and Babu Russick Lal Ghose of Calcutta. That Commission in fact was appointed with special instructions to ascertain by means of specially directed enquiries, conducted in the centres of factory labour, the views and requirements of the Indian operatives themselves as to the restrictions to be imposed on their labour in factories. They went thoroughly into the question of working hours by examining a large number of factories, and workmen, some of whom were put forward by the accredited local representatives on the Commission in each province; and the Commission recorded the conclusion that, "The operatives desired that the present working day, daylight to dusk, should be continued." The Commission further observed:—

"We give it as our opinion that there is nothing in the conditions under which Indian operatives work which calls for any legislative restrictions as to the hours an adult male may choose to work. Nor can we conceive any condition which can ever call for State interference in this matter." In accordance with this view the Indian Factory Act of 1891 contained no provision to limit the working hours of adult males directly or indirectly. I may mention here that that Act was regarded as embodying all the changes that were called for by the conditions of the mill industry. Replying to an observation from the late Hon'ble Mr. Nugent, who was the official representative of Bombay in the Viceroy's Legislative Council, His Excellency Lord Lansdowne said:—
"We believe that the effect of our measure will be to place factory labour in India on a proper footing, and our Bill will be accepted here and at Home, not, as the Hon'ble Mr. Nugent would have us believe, as a mere prelude to still further restrictions, but as a settlement as final as any settlement of such a question can be."

I do not say that an assurance such as this precludes the Government from revising the law in the light of any change in the conditions

of the industry. But the only circumstance that can be said to introduce a change in the conditions that prevailed in 1890 in the working of the mills is the introduction of electric light in some of them. In mills which do not use the electric light, the conditions of labour are precisely what they were at the passing of the present Act. The mills which work by natural light are the majority. Some mills which tried working with artificial light found it wasteful and have discontinued its use. I cannot help thinking that it is extremely unjust to these mills to be subjected to new restrictions while they have continued to conform to the practice of what Sir James Campbell, Collector of Bombay in 1892, called "the natural and satisfactory practice of limiting work to the hours of daylight."

Even to-day after 17 years, evidence before the present Commission strongly confirms the conclusions arrived at by the Factory Commission of 1890, whether we look to the evidence given by the large number of manufacturers or to the evidence taken from the mill-hands themselves. In the mass of evidence before us, there is a consensus, particularly in the Bombay Presidency, that the daylight hours are the most suitable to the manufacturers and the operatives. And what is more significant, two of the strongest opponents of long hours in cotton mills, the Hon'ble Mr. H. E. E. Proctor, Chairman of the Bombay Chamber of Commerce, and Mr. Bezanji Dadabhai, the well-known manager of the Empress Mills at Nagpore, whose 31 years' experience of the management of mills and close association with the mill-hands, entitle his opinion to the greatest weight, both advocated working from sunrise to sunset as the most suitable for the operatives. I quote Mr. Bezanji's words as reported in the evidence :—"He objected to the fixed 12-hour day because in the short day they would have to work by artificial light and this did not conduce to good work. He preferred daylight working, and the operatives did so too, as they did not like being kept in the mill after dark. Some of them lived a distance of 3 miles from the mill. Most of the factories in India worked by natural light, and once the electric light was introduced, there was the constant temptation to work longer hours. If the hands had the option, they would choose daylight working in preference to a fixed 12-hour day."

The evidence of operatives also tends to the preference of daylight to dusk hours (see pages 28 and 156 of the minutes of evidence). On all occasions, in Ahmedabad and in Bombay, the President kindly invited me to accompany him whenever the operatives had to be examined. We minutely questioned them, and their spontaneous reply was always that they did not wish to be worked by electric light. We then explained to them that in that case the longest day came in the hottest part of the year, and the shortest in the cold weather, and, further more, that Government may not be willing to legislate for a changing day. In spite of this explanation, Ahmedabad operatives to a man stuck to the natural day, and expressed their opinion in a decided way to the following effect :—"If it is a choice between 12 hours fixed day all the year round and an average 12-hour day, shorter in winter and longer in summer, then we are all in favour of

the average 12-hour day because we do not wish to work by electric light at any cost. It injures our eyes and we wish to work by daylight only. We would rather do the extra hour in summer than work by electric light for even an hour in winter." On another occasion at Ahmedabad the operatives said:—"At present the mill does not work by electric light though an installation has been put in. But if night work is introduced, most of the Mussalman weavers will leave and go elsewhere. We can get work in other mills . . . We strongly object to work at night." At Bombay, although the first expression was, as I have said, for natural light, after our explanation the opinion became divided. I take the following from the evidence:—"Some of us wish a 6 A.M. to 6 P.M. day fixed absolutely all the year round, because if there is any variation from day to day the manager will take advantage of it and gradually increase the hours. Others of us wish for daylight working only, *i.e.*, about 11 hours in winter and 13 in summer, varying with the length of daylight. This was the practice before electric light was introduced, and some of us wish to revert to it so as to escape work by electric light altogether."

Further evidence of the suitability of the natural day system can be found in the fact that out of 224 cotton mills in India, about 100 are fitted with electric light, and even of these 100 the evidence shows that many work from daylight to dusk in spite of their installation.

It has been calculated that the daily average working hours of a mill working daylight hours will be 12 hours and 5 minutes in the whole year. This calculation, however, does not take into account the second half hour interval which will have to be given under our recommendation when the working time exceeds 12 hours. When that is considered, the longest working day in the year will be about 12 hours 45 minutes and the shortest 11 hours; while during the greater portion of the year it would be about 12 hours. The average would be about 11 hours and 54 minutes. Thus, the great advantage of the natural day is that while it will not lead to excessive working of young persons, it also sets a limit to working of adult males, and renders overworking impossible. It would greatly facilitate inspection because the mills under this system cannot be worked after dusk, while the mills worked with artificial light will require inspection to prevent time cribbing. This must be a very powerful argument in favour of the natural day as in a vast country like India, where factories are scattered far and wide, oftentimes singly, it would be practically impossible to detect time cribbing if every factory is forced to put electric light.

The statement that mills in Madras will not be seriously affected by a fixed 12-hour day is not borne out by the inspection notes, where it is recorded (Nos. 150, 151, 161, and 162) that they are affected to the extent of from 15 minutes to one hour in their longest day.

It has been objected to my proposal that it would be impossible from the point of view of Government control to permit two totally different system of hours side by side in the same place. The obvious reply is that the natural day system does not need special control, and therefore the work of Government control will be much reduced in places

like Bombay, while in places like Ahmedabad, where, out of 45 only 2 or 3 mills use electric light, the work of control will be practically *nil*. In the Central Provinces, Madras Presidency, and in many individual mills in out of the way places, except for children, no special inspection will be required and much Government expense will be saved. On the contrary, if two systems exist side by side in Bombay, it will greatly help the operatives who have expressed their opinion in a divided way to select conditions best suited to their particular tastes and ideas.

The other argument used against my proposal is that, in the opinion of the majority, the fixed day will ultimately conduce to better working and will be to the ultimate advantage of the manufacturers and the hands. If that view be correct, the millowners and the mill-hands will themselves, in their own interest, adopt the 12-hour days and will not require any compulsion by the legislature, more particularly as the adoption of the 12-hour day will appreciably add to their working hours at the end of the year. Such a settlement is far preferable to one which must be arrived at with friction, disorganization, and discontent of manufacturers and operatives alike.

The argument that operatives will work in the natural-day-mills in the hot weather, and in the electric-light mills in the cold weather, does not appear correct. The former class of mills cannot employ an increased number of hands in the hot weather, nor can the electric-light mills do so in the cold weather.

The only plausible objection to the natural day is that it involves 45 minutes more a day in the hottest part of the year than under the 12-hour system. Against that, however, it may be mentioned that in the Bombay Presidency in particular, which contains the largest number of cotton mills, the atmospheric conditions in the cold weather months are most unfavourable and the hands have to work harder at piecing up the ends in the spinning department where young persons and children are mostly employed; while in the hot weather months the weather conditions being extremely favourable to spinning, there are fewer ends down and hands have to do less work.

In the Punjab and the United Provinces, where the days vary more in length than in Bombay, the Central Provinces and Southern India, and the heat is more severe, the manufacturers have themselves found out what is best for them, and have already put up electric installations. As is pointed out in the report, the working day may extend in the hot weather to 13½ hours, with natural light; but even now in the hot weather many of the mills actually work shorter hours than in the cold weather, and they will therefore adopt the uniform 12-hour day as a matter of course, without giving rise to any disorganization. In the United Provinces and the Punjab the climatic conditions are in fact the reverse of those obtaining in Bombay; and it would be absurd to suppose that manufacturers there would voluntarily adopt any system under which they would work their factories for long hours, while the conditions affecting spinning were unfavourable, and for shorter hours in the cold weather when the conditions were favourable.

Under my proposal the only change will be that in natural-day mills young persons would be allowed to work the daylight hours and the children half of the daylight hours without in any way increasing their working time under the 12-hour day system. I do not propose to increase the working hours of women, and as regards children my suggestion will give them a maximum of about 22 minutes over 6 hours for 2 or 3 months in the year, while it will bring down their work to about 5½ hours in the cold weather months.

Although I have discussed the question of a natural day in relation to cotton mills, it must not be forgotten that there are other industries where the natural day system is the only working system and where working by electric light is not usual. I may instance the woollen mills, the saw mills, the silk and paper mills, the match factory, the hosieries, etc. Speaking for the Bombay Presidency at least they all work by natural light, and although they have been proved never to work excessive hours, they will be as much affected as the cotton mills.

In the face of the facts set forth above, of the opinion of the Factory Commission in 1890, and the evidence of the operatives taken by it, of the consensus of opinion in favour of the natural day among manufacturers and operatives alike, of the general practice of working on that system in the majority of cotton mills, and wholly in some other industries, of the total absence of anything in the evidence against it, of the strong opinion expressed by Colonel Mactaggart that he had absolutely no reason to think that the hours of labour in force in the Bombay factories had any bad effect on the health of the operatives, of Dr. Turner's evidence that the mortality of the factory operatives is less than that of general labourers, and of the substantial advantages in respect of inspection, and the convenience of the operatives, I am strongly of the view that it is extremely impolitic and unjust, especially after the assurances of the Government of India in 1891, to interfere with a system so agreeable to manufacturers and operatives, and suitable to the conditions of the country.

VITHALDAS DAMODHER THACKERSEY.

Minute of dissent by Dr. Nair.

I beg to submit a separate report on most of the important points referred for the consideration of the Indian Factory Labour Commission. I regret that I have to differ on these points from the opinions of my colleagues, with whom I have worked so cordially for the last six months.

Introductory.

But the result of our investigations held all over India during the last few months into the various aspects of factory labour in this country leads me to a different conclusion to the one arrived at by my fellow members of the Commission. In spite of some attempts made in certain quarters to draw the Lancashire red herring across the track of the Factory Commission, I never deviated from my fixed purpose of investigating things at first hand and of forming my opinions on the strength of what I saw and heard, rather than trusting to external inspirations to guide me in my inquiries. To me, personally, there was no incentive to take any step which would even to the smallest degree handicap the industries of my native country in competition with Lancashire or Japan. But however much I, as a native of India, may be opposed to the interference of Lancashire in questions closely relating to the manufacturing interests of India, I cannot but admit that the result of Lancashire's interference has, on some occasions at least, been of considerable benefit to the Indian industries. The protection which factory women and children at present enjoy, under the law, they owe, to a large extent, to Lancashire. The many abuses which we found to exist in connection with factory labour in India are certainly not of Lancashire's creation. I am not prepared to maintain that because certain representatives of the cotton industry in Lancashire, the chief competitor with the Indian cotton industry have prominently drawn the attention of the authorities to the existence of grave abuses in the working of the Indian textile factories, those abuses ought to be condoned. Abuses are abuses whether they are pointed out by friends or foes. The only questions for us to consider were did these alleged abuses really exist, and, if so, what were the best means of removing them.

The chief complaint against the existing system of factory labour in India is the inordinately long hours that the labourers are worked in many industries and especially in the textile mills.

Section I.—*Adult Males.*

I am of opinion that the charge of working long hours habitually has clearly been proved against the textile industries in India, and I am further convinced, that taking all the circumtances of the case into consideration, nothing but legislative restriction of the hours of adult labour within reasonable limits will effectively prevent these long hours from being worked. This is the first point on which I differ from my colleagues, and I shall now proceed to give my reasons for the conclusion I have arrived at.

Long hours worked in the textile industry.

We have had ample evidence to prove that long hours are worked periodically in several of the industries in India. We have seen that operatives in ginning factories have had on occasions to work 17 and 18 hours a day. In rice mills and flour mills men have occasionally to work 20 or 22 hours. In printing presses men have had to work for 22 hours a day for seven consecutive days. I admit that these are only occasional occurrences. But for habitually long hours one must go to the textile industries.

The tendency to work long hours in the cotton mills in Bombay began, I understand, in the year 1898, though in Agra it has existed for the last 20 years. But the question of the inordinately long hours in these mills did not seriously attract public attention till the year 1905. The Collector of Bombay in his letter to the Government of Bombay, dated 24th June 1905, pointed out that out of 74 mills, the exact working hours of which he had ascertained, 16 mills worked 14 hours or more a day and 33 worked 13 hours or more. That was in the first half of the year 1905. But in June 1905 the Collector of Bombay wrote that "the above figures are now exceeded, and in some cases 14½ hours a day are worked from one end of the month to the other." A good deal has happened since 1905 to disturb the Bombay millowner who is inclined to work inordinately long hours. And yet 6 months ago, when the present Factory Commission was in Bombay, long hours of working were by no means unknown in the Bombay mills. Out of 20 cotton textile mills in Bombay, whose exact working hours were ascertained by the Commission, 1 mill worked day and night with changing shifts. Of the remaining 19 only 8 had fixed hours of working all the year round, and all of them worked 13 hours or more every day, exclusive of the midday interval, while 1 of them worked 14 hours a day. The 11 other mills, although some of them were fitted with electric light had changing hours in summer and winter. In summer they all worked between 13 and 14 hours, while in winter their hours came down to between 11 and 12½.

This system of daylight working, which is very much favoured in Ahmedabad, has resulted in very long hours being worked in the hottest and most trying part of the year. Thus, out of 10 mills in Ahmedabad and Broach, the hours of which were ascertained, 3 mills worked in summer 14 hours or over, while 7 worked between 13 and 14 hours. Some of these mills were fitted with electric light. For these long hours worked in summer in Ahmedabad there was some compensation in the winter season when the hours of some of these mills came down to 11. It was given to two cotton mills in Cawnpore to discover that, while they could work between 13 and 14 hours by daylight in summer, all that they had to do to work equally long hours in winter was to switch on the electric light.

The mills in Agra have comparatively fixed hours. In summer they work 15¼ hours a day, while in winter they come down to 13¾.

Calcutta is not a great centre of cotton industry, but even there the Commission visited 5 cotton mills, 1 of which works 13 hours

a day all the year round, while another works its weaving department 13½ hours and is content with 12 hours for the spinning department.

Delhi not to be behindhand of Agra can show hours in its cotton mills going up to 14 and even 14½. The jute mills in Calcutta, with few exceptions, work 15 hours a day, but it must be conceded that they work on the shift system except their weaving departments in which there are no real shifts at all. These facts and many others, which the Commission have recorded in their inspection notes, prove conclusively to my mind that the hours worked in the textile mills in India are excessive. And what is more, there is nothing to prevent the hours from getting longer. How can it be otherwise? His Honour Sir John Hewett, Lieutenant-Governor of the United Provinces, in his note to the Factory Commission, remarks: "I believe that the long hours which are followed, or at all events have been followed, at times in the jute factories in Calcutta and the cotton factories in Bombay have been to some extent brought about by what seems to me to be a pernicious system, namely, that under which in the former the agents of a mill are remunerated upon the gross outturn and not upon the profits, while in the latter those who financed the mill in its early days receive a rate of remuneration fixed at so much per pound of cotton cloth produced. These two factors point to outturn, not profits, as the object to be aimed at, and are productive of wasteful and uneconomical management." His Honour has put the case very well and further comment is superfluous.

Habits of Indian operatives.

But we are told that these hours are only apparently long, and that really the labourers in Indian mills work very casually, loiter about a good deal, go out when they like to eat, to drink, to smoke, and so on. This is a very old argument which has been repeated times without number, and nearly every one seems to be inclined to attribute the whole phenomenon of loitering to the ingrained habit of Indian workmen. I have carefully studied this so-called "ingrained habit" of the Indian workmen, and have come to the conclusion that it is not an ingrained habit at all but only a manifestation of the adaptive capacity which all human beings possess more or less. Intense and concentrated labour in a cotton mill for 13 or 14 hours, day after day, week after week, and month after month is beyond the physical endurance of ordinary human beings. And so when a mill operative, who has to earn his living by his manual labour, is put to work at a machine for a longer period than he can possibly endure, he has to adapt himself to that work in such a way that he can get through the work required of him with the least possible injury to himself. The labourer does not spread out the work over a long period of time, but finding himself compelled to work a long number of hours, reduces the intensity of labour as a safeguard to his own physical well-being. And under these conditions of struggle for existence the fittest to survive are not the worthiest or strongest, for they soon break down under the strain of long hours of work, but the most idle. A system more likely to bring about degradation of labour is impossible to conceive. That the Indian labourer has no ingrained habit which prevents him from sticking to his work is sufficiently proved

by the facts supplied by an Upper India woollen mill, and which are quoted in the report of the majority of the members of the Commission.

Taking the average for the whole year the workers in that woollen mill took 1·05 spell of rest each a day, which is about 20 minutes a day. The explanation for this absence of the "ingrained habit" in the operatives in this woollen mill is twofold. Its hours are short and its management is efficient. One European mill manager admitted that the loitering habits of the operatives could be put a stop to if efficient supervision is exercised, but as such efficient supervision was costly, he preferred to go on as at present. The instances of the operatives in the jute mills working by shifts and of operatives in engineering works loitering less than the workers in cotton mills, mentioned in the majority report, further prove the relation between long hours and loitering. But the most notable instance of all is found in the case of the women workers. Women workers all over the mills in India loiter less than men, for the simple reason that they work shorter hours. In my humble opinion, in India it is the worker who suffers from bad management and not the management that suffers from bad workers. The experience of other countries that "short hours have also reduced the interruptions in the course of the day" has been realized at least in one mill in India, and in the face of these facts to go on charging the Indian labourers with possessing ingrained habits of idleness is to use the expression once used by the present Chief Commissioner of the Central Provinces "the refuge of the sweater."

Skilfulness of the Indian operatives

Next to the alleged idle habits of the Indian operative the quality in him which is supposed to necessitate these long hours is his unskilfulness. That at the commencement of the factory system in India the operatives were absolutely unskilful stands to reason. But that in the last half century they have made little or no progress in skilfulness is a proposition which requires further proof to support it. On this point the evidence given before the Commission is conflicting. Some have stated that the operatives have improved considerably in skill, while others maintained just the opposite view that they have made no improvement, while yet others went further and said that they never will. I am not competent to judge between these conflicting opinions. But I feel inclined to the view that the operatives have improved and are improving gradually.

It is a well-known fact that in Bombay wages have gone up. But at the same time the cost of labour to the cotton industry has not risen appreciably. This is partly due to the increased productive capacity of the Indian operatives. Outside experts, who are competent judges in matters of this sort, like Mr. James Platt and Mr. Henry, Lee, are of opinion that "in no country on earth except in Lancashire do the operatives possess such a natural leaning to the textile industry as in India." Dr. G. Von Schultze-Gaevernitz writing in 1895 expressed that "the number of operatives up to this time 5 or 6 times as many as the English is to-day in the best spinning mill in Bombay only $3\frac{1}{2}$ times as high, *i.e.*, does not stand far behind the German." If that

statement is correct, and in 1895 if the Indian operatives did not stand far behind the German there seems to be no reasonable ground to complain of his slow progress or no progress. And at the present time according to the very careful calculations made by Mr. Simpson of Messrs. Binny & Co. of Madras, a cotton mill in Madras with 35,000 ring spindles, 800 looms, average count 16s working 67½ hours a week would employ 2,622 operatives all told. Whereas for a similar mill in Lancashire working 54½ hours a week the total number of hands required would be 982, which works out a proportion of 2·62 Indian hands to 1 English hand. And if we also consider that the average monthly wage of a Lancahsire operative will be about Rs. 60 and the average monthly wage of a Madras operative is Rs. 15 it is clear that for the same money the Indian millowner gets nearly double the work that an English millowner does. "India is the mother country of the textile industry, and up to the time of Arkwright possessed the monopoly of fine yarns," and it seems incredible that the Indian labourer in the textile mills is making no progress in skilfulness. Before condemning the Indian operative as inefficient and incapable of improvement he ought to be given a fair hearing. In a memorial submitted to His Excellency the Marquis of Lansdowne, Viceroy and Governor-General of India in 1889, by the mill operatives of Bombay, it was stated that "it has been said to the detriment of your petitioners that an Indian mill operative is not as hard-working as his brother workman in England, and that a mill operative in England does the work of three men employed on the same work in an Indian mill. . . . . The real cause of this, your Lordship's petitioners submit, is the bad machinery and the bad raw material used in the mills. . . . The breakage in the thread is so continuous here on account of the bad quality of the cotton that millowners are compelled to employ more men." As the effect of the long hours has to be considered before judging of the idle habits of the Indian operatives, so the quality of the raw material they have to handle has to be taken into consideration before the extent of their skilfulness or otherwise is determined.

The influence of long hours on the physique of the Indian operatives.

Leaving aside these excuses which are usually put foward to justify the long hours worked in Indian mills, I now come to consider the effect of long working days on (1) the mill operatives, (2) on the textile industry in India.

The question as to whether the physique of the operatives has been injuriously affected by the long hours they are made to work in the mills has engaged the serious attention of the Factory Commission. We have tried to find out the actual truth of the matter by personal inspection of mill operatives, by examining and cross-examining medical men in the different centres of mill industry in India, and by the study of various vital statistics bearing on the question.

The question is an exceedingly difficult one. The necessary data for arriving at a correct scientific conclusion are absent; Indian vital statistics are notoriously unreliable; mill hands are constantly changing;

and medical men in India, and even hospital authorities, under the depressing effect of a peculiarly trying climate do not keep any records of the clinical features of the cases they examine. Under a combination of these adverse circumstances any definite opinion expressed on the point at issue is likely to be more dogmatic than scientific. I have carefully inspected the operatives in over 200 mills in different parts of India, and, in my opinion, they were all apparently healthy. On the strength of such inspection, however, I am not prepared to say, as my friend Lieutenant-Colonel Mactaggart does, that there is no physical deterioration among the factory operatives in India. The chief test, in my humble opinion, of physical deterioration is diminished power of resistance to disease.

The Sickness Index, as Dr. Turner of Bombay observed, is the only reliable criterion, and accurate evidence on that point is not available. Rough and ready statements like "the mill operatives as a class are far more healthy than outside labourers of the same class" or "the mill operatives are of very poor physique and distinctly inferior to the agricultural labourers" are good enough in their way, but are unsuited for any scientific conclusions to be based upon. Colonel Mactaggart makes much of the absence of skin diseases and of tubercular glands among the operatives as proving their healthiness. To my mind these facts do not warrant the inference drawn from them. I saw several cases of skin eruptions in very healthy looking children in some of the Calcutta jute mills. I am not prepared to say that there is physical deterioration in these children because they exhibit certain skin eruptions. These skin eruptions are well known to medical men as belonging to a class of skin diseases commonly called "Trade Dermatitis." Many dermatologists consider that these are all varieties of Dermatitis Veninata. They are purely caused by external irritation from jute or other materials that the workers have to handle, and have nothing to do with physical deterioration. The absence of tubercular glands again does not necessarily indicate, to my mind, the absence of any tendency to tubercular affection in the operatives. And the evidence of Major A. Street, F.R.C.S., I.M.S., Surgeon to the Jamsetji Jejeebhoy Hospital, distinctly points to the presence of tubercular glands in children working in the mills. "From my experience at the J. J. Hospital in Bombay," says Major Street, "I am sure that tubercular glands of the neck are particularly common in young operatives, and frequently point out to my students that they (the operatives) and firemen on board ship produce the large majority of the cases we see." Major Gordon Tucker, Physician to the J. J. Hospital, confirms the statement of Major Street, his colleague on the staff of that Hospital. "Phthisis is very common among them (the mill operatives)" says Major Gordon Tucker. And he continues—"speaking broadly the ordinary case of tuberculosis seen in Hospital would be a mill-hand, while the ordinary case of malaria would be a coolie. Contrasting the physique of these two classes. the mill-hand came out badly."

Thus the evidence of these two medical men, one a surgeon and the other a physician, on the staff of the largest hospital in Bombay, the city

with the biggest factory population in India, affirms the greater prevalence of tuberculosis among mill-hands. Unfortunately these medical men have not been able to give us any statistics, as the records of the J. J. Hospital are periodically destroyed, and with them all evidence of the greater prevalence of tubercular affections among mill-hands. But the impressions of two clinical teachers in big hospital, with a medical school attached, are even more valuable than statistics. Where the hospital doctors of Bombay failed, the Health Officer of Bombay, Dr. Turner, has given us some statistics bearing on the point although they cover only a period of six years. His figures were published in Appendix G of the Textile Factory Labour Committee's report and again they are published along with his evidence before this Commission. Dr. Turner has given figures to show the incidence of phthisis among the factory population and the general labourers for the years from 1900 to 1906. Comparing the figures there is a slight excess in the percentage of deaths from phthisis in Bombay among the factory hands as compared with the general labourers. The excess is not very marked. But it must be considered that among the general labourers Dr. Turner has included earthworkers and dock labourers, two classes of workers who are exceedingly liable to lung diseases. The general death-rate of mill operatives is everywhere quoted as exceedingly low. It was the same case in the evidence given before the Select Committee appointed in England in 1816 to investigate into the state of the children employed in factories in the United Kingdom. Commenting upon that Sir Robert Peel said in the House of Commons, "if the evidence were to be trusted, instead of debating such a bill as was then before them, application ought to be made to the Legislature for the erection of cotton mills for the purpose of further and more effectually providing for the health of His Majesty's liege subjects." The evidence of the aforesaid 3 Bombay medical men, although not sufficient to give a decided opinion as to the existence of physical deterioration in the mill operative—for that as I have already said there are no data—is still enough to create a strong suspicion that the health of the mill operatives in Bombay is not all that it should be. And strongly corroborative of them we have the evidence of two medical men, both of them Indians practising medicine in Bombay. Sir Bhalchandra Krishna thinks that there is physical deterioration among the mill-hands, but is careful enough to say that it is due to bad ventilation in the mills and to the alcoholic habits of the operatives, and not to the long hours of work. If the mills are badly ventilated, the longer the operatives work inside them the greater the accumulation of carbonic acid and other impurities of the respired air in the atmosphere inside the mill, and consequently the greater the injury to the operatives working inside them, is a fact which perhaps escaped the attention of Sir Bhalchandra Krishna. Doctor Chavan, L.M.S., is a native of Ratnagiri, the district from which a large number of mill operatives come to Bombay. He has a large practice among mill-hands, and his opinion that the mill operatives suffer to a very large extent from phthisis and dyspepsia is valuable. He comes more into contact with the mill operatives than most Civil Surgeons are

likely to do. Doctor Chavan of Bombay and Rai Sahib Dajee Ramachandra of Nagpur, although they may not be men of such high professional standing as most of the other medical witnesses who gave evidence before the Factory Commission, have, I believe, a greater and more intimate knowledge of the factory operatives, and their evidence I consider of great value.

The majority of the medical witnesses said that they have not observed any physical deterioration among the factory hands and that they have not noticed that the operatives were more liable to any diseases than other labourers. This negative statement does not carry us very far. There are many reasons that render it difficult for the ordinary Civil Surgeon to observe evidences of physical deterioration in the mill operative, when they are present. These causes may roughly be divided into (1) the habits of the mill operatives, and (2) the nature of the development of some of their maladies. Any one who knows natives of India, and specially the lower classes in India, knows how nervous they become when even the slightest illness attacks them. If they happen to get ill away from home their chief concern is to get back home. This peculiar habit, or frame of mind, call it by whatever name, is in my opinion more responsible than any thing else for the extraordinary changing of mill-hands that is noticed in all the Indian textile mills. Mr. Leslie of Graves, Cotton & Co. of Bombay, Mr. Bezonji, Manager of the Empress Mills, Nagpur, and Mr. Simpson of the Buckingham and Carnatic Mills, Madras, have all supplied us with very careful statistics which go to prove that *all* the hands in a mill change on an average once in 18 months. Mr. Leslie says "that the most astonishing figures in this respect are to be found in the number of people who applied for 'leave altogether' or in other words resigned. These total no less than 2,158 in six months and represent 38 per cent. of the total number of people employed. I must confess that these figures came as a surprise to me for they go to show that some 18 months is really the maximum period for which a mill-hand works in a Bombay mill at a time." But Mr. Leslie's figures for Bombay are corroborated by mill managers in Nagpur and Madras and therefore it is safe to assume that the practice is general in all the textile mills in India. What is the explanation of this constant taking of 'leave altogether' on the part of the mill-hands. The explanation usually given by the mill managers is that all the mill operatives are peasant proprietors who have their little plots of land in their own village and that they leave the mills from time to time to cultivate and look after their lands. I have heard this explanation given at least fifty times in the course of our enquiry. In spite of its universal acceptance by millowners and managers I have considerable difficulty in accepting it. In the first place I cannot believe that the three quarters of a million mill operatives in India are all or even a majority of them owners of plots of land, however small.

At the utmost about 20 per cent. of the total number of mill operatives in India may own land themselves or may be members of undivided Hindu families owning land. The remaining 80 per cent. if

they periodically leave mill work to go and cultivate lands must do so as hired agricultural labourers under some landed proprietor. Generally speaking, as agricultural labour is paid less than mill labour in India there must be some explanation for the operatives leaving more remunerative work for less paid labour. Then again agricultural labour is seasonal. It does not go on all the year round. The figures of the Carnatic mills show that the hands left the mills in large numbers every month. Taking the year 1907 the lowest number that left in any month was 264 in November and the highest 397 in May. The average for the whole year was 329 a month. This shows that it is not to work in the fields that the hands leave the mills.

We were also told that most of the mill-hands save enough money in a few years and then retire and go back to their village homes and live on their savings. I doubt if this happy termination of a mill operative's life occurs even to 1 per cent. of the hands employed in Indian mills. Good many of the hands are indebted to money-lenders having borrowed money on, usually in Bombay at 72 per cent. interest, I am told. Many others spend a fair proportion of their earnings on drink. A large number have to send money every month for the maintenance of their families left behined in their villages. And after all these, if the mill-hands in a few years can save enough out of their 15 or 20 rupees a month to live in comfort "ever after" they must be extraordinary financiers indeed. In all our inspections of mill operatives I noticed that there were very few men over 40 to be seen. In England, I am told, that men over 40 or 45 are generally not taken into the mills. In India, where everywhere one hears complaints of shortage of labour, managers welcome all labourers young and old. And yet men over 40 are not generally to be seen. Again the explanation is given that they have all retired on their savings. Is it likely? Whatever may be said of the Indian operative it cannot be said that he is not fond of money. If then, he has health and strength to do the work which he was accustomed to do for some years, is it likely that he will give up his work and his wages. The Indian officials in Government service show no such tendency to retire. When they reach their 55th year they usually very humbly request Government for an extension of service. Why is the mill-hand so anxious to retire? In my humble opinion the reason of the early retirement of the Indian mill operative is his physical breakdown which unfits him for any further mill work. Mr. Bezanji, who has been the manager of the Empress Mill, Nagpur, one of the largest cotton mills in India, for over 25 years, told me that he has seen men who had worked for some years in his mill and subsequently left the mill, bringing food every day to some of their relations working in the mill. And when asked why they did not themselves work in the mill, they replied, that they had no longer the strength to work. This exodus from the mill by the time the physical break down comes prevents the physically deteriorated mill-hand coming under the observation of the Civil Surgeon.

Then it has been stated that the gradually advancing physical deterioration in the operatives actually at work in the mills ought to

have been noticed, if it really existed, by the various ex-officio medical inspectors who from time to time visit the mill. But I should like to know how many medical inspectors have closely examined the operatives. How many of them have put a stethescope to the chests of mill operatives. How many have watched from time to time the nature and frequency of attacks of such apparently trivial ailments like cough, fever, diarrhœa, etc., to which the operatives are subject. According to Doctor Kingston Fowler, of Brompton Consumption Hospital, people who work in dusty atmosphere, in imperfectly ventilated rooms, are very liable to develop fibrosis of lung combined with tuberculosis. Workers in cotton mills are, among others, liable to this form of lung affection. Cough is the first symptom noticed. "The course of the affection is extremely chronic and for years there may be no other symptoms except a moderate degree of emaciation. Cases which have run a very prolonged course may terminate with very acute symptoms. Emaciation may be rapid towards the close." And Dr. Fowler also says that the presence of tubercle could hardly be discovered in the early stages by physical examination. If that is so, it will be interesting to know how it is possible for any medical man walking through a mill looking at all the operatives to say that there is no physical deterioration and that the operatives are all healthy? Before the operatives go away on their "leave altogether" they take unauthorized holidays. On an average an operative in a cotton mill absents himself from work from 4 to 6 days in a month. The managers put this down to absolute laziness on the part of the operatives. The operatives themselves when questioned about it explained that it was out of sheer physical exhaustion that they occasionally gave up a day's work and wages and took rest. This explanation to my mind seems to be the correct one, and for this reason. After the Commission paid a surprise visit at 7-45 P.M. to mill No. 27 (inspection notes) the following note was recorded:—"The carding and preparation rooms (the only part of the mill at work) were badly lit, and there was no ventilation, all windows were closed, and the air was hot and oppressive: the perspiring workers looked dull, listless, and exhausted, and the few children half dazed." I am perfectly convinced that if the mill operatives generally go home in the condition in which I saw the operatives of Mill No. 27 on that November evening, they cannot possibly work for 26 days in a month. And if that is the condition of the operatives at the end of a day's work in November in a mill working 13½ hours a day, one can more or less imagine the state of the workers in a mill which works 15¼ hours during an Indian summer's day. We have often been told that on account of the loitering habits of the Indian operative he never gets physically deteriorated even though his hours of duty may be long. In the course of a similar inquiry in England in 1816 when a medical witness was asked if inhaling of dust and cotton fibre were not injurious to health, he declared himself quite unable to say; and when invited to say why not, suggested that "the bad effects were counteracted by constant expectoration."

The Indian factory population is a constantly changing one. Men from agricultural districts come to town to work in the mills, get rapidly deteriorated under the strain of long hours in closed and stuffy

rooms, and are replaced by another set from the country who are "used up" in their turn and passed back to their villages. The only town in India with anything approaching to a permanent factory population is Cawnpore, and the half-timers in Cawnpore, probably the children of used up mill operatives, were physically among the worst we saw anywhere in our tour of inspection.

The only other statistics that I have to notice in connection with the question of the physique of the operatives are those relating to their weights. In almost every mill visited by the Commission a certain number of adult operatives chosen at random were weighed and their weights recorded in the inspection notes. But as mere recording of the weights of a certain number of operatives in itself led to no conclusions, I believe, at the suggestion of Lieutenant-Colonel Mactaggart, the Commission decided to compare the weights of the operatives with the weights of the prisoners in the provinces to which the operatives belonged. The figures for the weights of prisoners were kindly supplied by the Jail Department of each province, and a comparative statement of the weights of mill operatives and prisoners has been prepared. As the large majority of the operatives in Bengal and the Punjab really come from the United Provinces and those in Burma from the Northern Circars of the Madras Presidency I compare below the operatives in those provinces with the prisoners of their native province.

Province.	Average weight of spinners.	Average weight of prisoners.	
	lb.	lb.	
Bombay	102·09	112·12	
United Provinces	107·01	115 08	
Bengal	107·93	115 05	U. P.
Punjab	113·8	115 05	
Madras	113·63	114·38	
Burma	117 14	125·7	Rajamundry.
Central Province and Berars ..	100·92	110 45	Central Jail.
Eastern Bengal and Assam ..	108·	110 846	

It has been suggested that these comparisons are not fair as every Jail Superintendent makes it a point to feed up and fatten the prisoners under his charge. I know that that is a procedure adopted at many sanatoria for the treatment of consumption. I did not know that the Indian prisons were run on the Nordrach system. I do not want to exaggerate the value of the inference to be drawn from these figures. But these figures justify the remark of Mr. Bezanji in his evidence before this Commission that "those accustomed to mill life regard it as worse than jail life." I do not claim that these figures in themselves absolutely prove the existence of physical deterioration in the mill operatives. But at the same time these figures taken along with the other facts I have mentioned establish a strong suspicion that the long working hours have caused physical deterioration in the workers.

The evidence of the medical witnesses also indicates the existence in their minds of a belief as to the evil effects of long hours on the health of the mill-hands. Out of 36 medical witnesses examined by the Commission only 27 have expressed a definite opinion as to the necessity

or otherwise for a legislative restriction of the working hours. Of these 23 are in favour of such legislative restriction, while 4 are against it. Out of the 23 medical witnesses who are in favour of legislative restriction 15 have said that they have observed no physical deterioration in the operatives. And yet they advocate legal restriction of the working hours of adult males. After all if the State is prepared to protect the health of the mill operatives the proper time to take the necessary measures for affording such protection is not after the workers have broken down and human wrecks are scattered all over the country. The proper time for interference is before such calamities have happened. The almost unanimous opinion of the medical witnesses who testified before the Factory Commission declares that the time for such interference in India has come.

The influence of long hours on the supply of labour.

I shall next consider the evidence as to the injury done to the industry by the long working hours in textile mills. The inordinately long hours in the Indian mills have been established only within the last few years.. And yet already their evil influence is beginning to be felt both on the workers and on the industry. Every man who was tempted to work these long hours by the promise of higher wages, not only did a physical injury to himself but helped to enforce equally long hours on every other factory labourer in India. The methods of modern factory labour are such that the conditions of labour of even a single operative react upon those of all others. In a factory which works for 14 hours a day it is unlikely that a labourer who is only able to work 12 hours a day will be given any employment. In the large majority of cases the individual worker in Indian mills is deprived of any choice as to the conditions of employment. In India with a race of people not overstrong physically, coupled with an enervating climate, a large proportion of the working classes find mill labour as it is carried on at present far too much for their strength. And the result has been that a very large number of labourers do not attempt mill labour at all, or try it for a very short time and give it up for good as they find it beyond their physical endurance. This fact explains the shortage of labour which is complained of everywhere. I have hardly come across a textile mill in India which was not always short of labourers. And yet India is a country teeming with poor people. We have enough of labourers here to send out to South Africa and West Indies and a number of other British colonies. But the mild Hindu with his conservative habits and stay-at-home tendency does not choose to work in the Indian mills, earn his living, and remain in his native country. Why ? Mr. S. H. Fremantle, I.C.S., who was deputed to report on the supply of labour in the United Provinces and in Bengal in 1906 wrote thus in his report :—" One cause for the unpopularity of mill labour is undoubtedly the distaste for the discipline which has necessarily to be maintained in a large concern, coupled with confinement for long hours in the mill. Discipline in most mills is no stricter than it need be, and education may do much in course of time to mitigate the natural aversion felt towards it, but confinement for long hours is a matter within the power of mill managers to control . . . . .

there was no complaint until the introduction of electric light. Electric light has now been installed in nearly all the Upper India and Bengal cotton and jute mills. . . . Some use their power with moderation and do little more than add an hour or two to make the short winter days equivalent to the long days of summer. Others, however, have no such scruples. In September when the day breaks before 6 I found one mill using the electric light to work up to 9 o'clock at night and several were running up to 8 P.M." Mr. Fremantle's observations have amply been confirmed by others. In Calcutta over 90 per cent. of the operatives in jute mills come from outside Bengal, not because Bengal has an insufficient supply of workers, but because the Bengali workers cannot stand the strain of work in the jute factories. In the Punjab again 95 per cent. or over of the workers in the cotton textile factories come from outside the Punjab. But curiously enough in the non-textile factories in the Punjab—the flour mills, the ginning factories, etc., we found a large proportion, if not nearly all, Punjabi workers. I asked the Hon. Mr. Har Kishen Lall of Lahore for an explanation of this apparent boycott of the cotton mills by the Punjab labourers, and he told me that the Punjabi did not like to stand up and work these long hours in the cotton mills. If these explanations are correct, and I see no reasons to doubt them, the long hours are to a very large extent responsible for the shortage of labour complained of everywhere in the textile mills in India, and which is acknowledged to be a great obstacle in the way of the further development of Indian industries. The evil is quite manifest and is keenly felt both by the labourers and their employers. And yet neither party has done anything to mitigate it. It is an industrial injury done to the working classes and it certainly is against the interests of the employers. But as Mr. Walker has very clearly pointed out in his work on Political Economy "the working classes, unless protected in an unusual degree by political franchises, by the influence of public education, and by self-respect and social ambition, show a fatal facility in submitting to industrial injuries." And as to the self-interest of the employer being sufficient to secure wise action on his part Mr. Walker says "mankind, always less than wise and too often foolish to the point of stupidity on the one hand, or of fanaticism on the other, whether in politics or domestic life, in hygiene or in religion, do not all at once become wise when industrial concerns are in question."

Under these circumstances every one connected with the textile industry in India, millowners, mill managers, factory operatives, factory inspectors, both lay and medical, have all become convinced that some sort of limitation of the working hours of mill is necessary. Mr. Fremantle, I.C.S., in his report on the supply of labour says "almost all admit that the long day is an evil that they would restrict it to a maximum of twelve hours if other mills did the same. This, of course, can only be effected by legislation as experience proves that agreements among millowners themselves are not invariably adhered to when they conflict with the interests of individuals. For this reason most managers would welcome some legislation in the matter." The Millowners Association of Bombay at their meetings held both in

April and August 1905 decided to keep the hours worked in their mills within reasonable limits, but were not able to keep to their resolution beyond a very short time.

Opinion of mil lowners and managers on restriction of adultl abour.

Before this Commission 16 millowners and 42 mill managers appeared and gave evidence in favour of a legislative restriction of the working hours of adult male operatives. The large majority of the witnesses examined by us were connected with the mill industry either as owners, agents, or managers. And yet there were 97 witnesses who favoured a legislative restriction of the working hours of adult males against 103 who were opposed to it, while the mill operatives were practically unanimous in asking for legislative protection. It would be unreasonable to expect a majority of the millowners and agents to ask for legislative interference to restrict hours of adult labour, especially in a country where a large number of them receive their remuneration calculated on a percentage of production and not of profits. Under conditions like these the fact that 16 millowners came forward to advocate legal restriction of adult working hours as against 34 who were opposed to it shows the remarkable extent to which the opinion in favour of State interference has grown and spread even in quarters where one would expect nothing but the most determined opposition to such a proposal. Coming down to the managers 42 are for legislative restriction and 49 are against, while among witnesses unconnected with the industry 39 are for and 20 against State interference. Apart from numbers, the advocacy by Messrs. Tata and Sons of Bombay of a legally restricted day for all factory workers has impressed me, personally, with the practicability and reasonableness of the demand. Messrs. Tata and Sons are among the largest firms of manufacturers in India, and just now they are about to launch out into a practically new department of industrial activity in this country. When the pioneers of the new iron and steel industry in India who are also among the foremost cotton manufacturers in this country voluntarily come forward with a proposal to restrict the hours of adult labour by legislation, it may reasonably be assumed that the proposal that they make is one which in their opinion will be for the benefit of the industries in which they hold such a supreme position.

I am inclined to accept the opinion of Messrs. Tata and Sons as a guide in matters connected with Indian industrial questions not merely on account of the magnitude or variety of their manufacturing enterprise, but also for the comparatively rare combination of humanity and benevolence with sound business principles, which they have achieved in all their undertakings. In my humble opinion a manufacturing firm which never sweats its workmen, but on the other hand treats them with humanity and kindness, and provides them with dwellings, and encourages them with prizes and other rewards for honest work, and steady and persevering industry, has more claims to be heard on questions regarding the relation of capital and labour than another which has its eye only on its production and profits and which patiently waits for the

City Improvement Trust to provide dwelling-houses for its workmen. The manufacturers who told us in Bombay that they did not care to invest money on building workmen's quarters as it would only bring them a return of 2½ or 3 per cent. at the most, while if they invested their money in cotton mills they were practically sure of a return of 25 per cent. per annum, may be excellent business men in their way, but in my humble opinion are scarcely the sort of people under whose unfettered control the comfort and well-being of thousands of Indian labourers can be entrusted. As I have already pointed out there is now a general consensus of opinion that the long hours in the textile mills ought to be regulated in some way or other. And my colleagues on the Factory Commission have also come to the same conclusion. Like them I also would not advocate direct legislative restriction of adult hours if some other less drastic measure would answer the purpose equally well. With that view I have very carefully considered the proposal put forward by the majority of my colleagues for creating a class of young persons with hours of labour restricted to 12, and have come to the conclusion that this proposal will not reduce the hours of adult labour in all the textile mills in India. The majority of the members of the Commission are sanguine that their proposals will restrict the hours of all textile mills to 12 a day and thus indirectly gain the object of regulating the working hours of these mills. I am emphatically of opinion that the proposals of the majority of the Commission will do no such thing. If factory inspection is carefully done the proposed "young persons" class will afford protection to the young persons only. The adults will remain where they are, absolutely unprotected. My reasons for so strongly dissenting from the majority of my colleagues on this point are as follows :—

Objections to the young persons class.

The proposed "young persons" class will not affect the weaving departments of textile mills as there are very few young persons engaged in that branch of the industry. This has been admitted by many managers and millowners who gave evidence before this Commission and it has been confirmed by our own observation. In England women largely work in textile mills, and the control of their hours along with those of young persons and children effectually control the working hours of the mills. But in India women in textile mills are generally confined to the reeling department. Out of many thousand weavers we have seen during our recent tour of inspection we only came across 3 women weavers. So that the weaving department without women, young persons, and children will be practically uncontrolled so far as hours of work are concerned. But it has been put forward that weaving departments could not be worked enconomically independently of the spinning department and so the hours of the spinning department will practically control those of the weaving. This argument is absolutely futile. There are any number of purely weaving mills in England, and even in Bombay there is one such. Hitherto as the cotton spinners in India mainly manufactured yarn for sale in India, China, and other countries, weaving occupied a comparatively subordinate place in the cotton textile mills. But of late years the development of the *swadeshi*

spirit both in India and China has made the demand for cloth in India greater and the demand for Indian yarn in China less. The result of this twofold process has been and will continually be to give greater impetus to the manufacture of cotton cloth in the Indian textile mills. Under this new impetus weaving mills will spring up or new weaving sheds in old mills will rise, worked, it may be, by separate machinery, as is done in the Empress Mills at Nagpur, or it may be that even where the spinning and weaving departments are worked by the same engine, the weaving department will work longer hours than the spinning, as it is now being done in the Bengal cotton mills in Calcutta. Thus it is evident that the new proposal will not restrict the hours of work in weaving mills or weaving sheds, and one important branch of the textile industry will again be left free to work as long hours as it likes. Then as to spinning, a number of millowners and managers have declared that in case the hours of young persons are restricted, they would do away with the services of such protected persons and work the mill with adults wherever possible.

To quote the opinions of a few—

(1) Mr. Chimanlal Nagindas of Ahmedabad, representing the Ahmedabad Jubilee Spinning and Manufacturing Co. and the Ahmedabad Manufacturing Co., deposed on cross-examination: "Personally he would have to dismiss these workers, as the young persons would not consent to work half-time and they would not be allowed to work full adult hours.

(2) Mr. A. K. Leslie, of Greaves Cotton & Co., Bombay, said: "the creation of a class of young persons would in certain cases have the effect of restricting the working hours, but in those mills where young persons are not largely employed they would have to go."

(3) Mr. Baptist, Manager, Morarjee Gokuldas Mill, Bombay, said: "It was difficult to say whether mills could obtain adults in the place of young persons, but he should personally do his best to get adults."

(4) Mr. Gordhandas Khatau, of Khatau Muckenji Spinning and Weaving Co., of Bombay, said: "In his opinion the formation of this class would mean that mills would try to work with adults only."

(5) Mr. E. John, Millowner, Agra, said: "He would have to get adults to take their (young persons') places.

(6) Mr. Thornley, Mr. John's, Mill Manager, Agra, said: "that he thought they would be able to get the extra adults."

(7) Mr. A. Butterworth, Manager, Cawnpore Woollen Mills: "If the young persons class were created they could replace the 220 young adults affected by full age adults and so work the mill."

(8) Mr. G. E. Sutcliffe, Manager, Sholapur, said: "If the young persons were limited to 12 hours work, it might be possible, though difficult, to run the mill beyond those hours. The young persons class would make a difficulty which could be got over by a little contrivance."

I have quoted above from the evidence given before the Commission by millowners and managers from Ahmedabad, Bombay, Agra, Cawnpore, and Sholapur. They all say that the young persons *could* be replaced by adults, and what is more they *would* be so replaced, and some at least of the mills would thus run for longer than 12 hours. I am not a cotton manufacturer, and so on a practical manufacturing point like this I accept the opinion of these practical men, voluntarily expressed. From what I have seen, this substitution of adults for young persons ought to be more easy in mills with mule spinning than those with ring frames, as the percentage of young persons in such mills is very low. And it is a curious coincidence that some of the mills which are the worst offenders in the way of working very long hours are fitted with mules, with only a very small number of ring frames if at all. Those mills are almost certain to escape the indirect restriction attempted to be imposed through the medium of the "young persons" class. And even some of the mills with ring frames and their 25 or 30 per cent of young persons would, as far as I can make out from the opinion of practical manufacturers, get rid of them and try to work with adults. It may be objected that the conditions of labour market are such that it would be impossible to get the extra number of adults required. Mill managers and owners know how best to obtain the labour they want. Mr. G. Khatau, of the Khatau Muckenji Mills, says that "if a young persons class were created, one mill will steal adults from another mill and run for a longer time." Then again, as pointed out by the Textile Factory Committee in their report, "adults who have worked a whole day would frequently work all night in another mill in which wages are paid daily, thus securing money for immediate wants and that these men would absent themselves from work during the succeeding day or days."

In spite of all these attempts to get adult hands to replace the young persons a certain number of mills may fail to secure the extra hands necessary to make them independent of the young persons. Then we shall have two sets of mills in the country, one which has been able to get rid of all its young persons and replace them by adults and at liberty to work as many hours as it likes and the other whose hours are controlled by its young persons whom it could not replace. A more unfair regulation it would be impossible to conceive. It will be handicapping one set of mills against another and the economic injury involved in the process will be very great indeed.

I have been reminded that the restriction of children is also an element that must be taken into consideration. To a certain extent, perhaps, it is. But I remember that the total number of children employed in the Bombay mills is only about 2½ per cent. of the total number of operatives. I am also aware of the fact that some of the best

spinning mills in Bombay like the Century Mill are run without the aid of a single half-timer. The Century Mill employs 2,475 men and 425 women and no children. Mr. C. N. Wadia, its managing agent, told us that the young persons only amount to 15 per cent. of the total mill operatives. Mills like the Century are entirely unaffected by the restriction on children while they ought easily to be able to replace their 15 per cent. young persons by adults.

It might appear to a casual observer that the restriction on adult male labour is a worse handicap on the industry than the indirect restriction imposed through the young persons class. But as a matter of fact the young persons class will in the long run crush the Indian textile industry in competition with China and Japan. In Japan the cotton mills are already working 22 hours a day by two shifts of 11 hours each. To compete successfully with Japan our cotton mills may have to work equally long hours. If adult labour be restricted by direct legislation, mills could work night and day by two shifts of 12 hours each.

But if the working hours of mills are to be controlled through the young persons class, then the period between which the members of that class are permitted to be employed must be fixed. According to the proposal of my colleagues that period is fixed between 5-30 A.M. and 7 P.M. If that proposal is adopted then those mills which are unable to work without their young persons will be prevented from working night and day with changing shifts. Thus it is evident that for some of the Indian mills, at all events, the young persons class is a more severe handicap than direct adult restriction. But my colleagues have suggested that power might be vested in the Government of India to extend the hours within which young persons may be employed whenever the demands of the manufacturing industry justified such extension. Such power will, of course, be only exercised when demand is great and the necessity for working the mills for long hours is clearly proved.

It is exactly at such junctures that the millowner is likely to sweat his workers. The moment the Government of India relax the limit for the employment of young persons, they will be worked in shifts while the adults will most certainly be sweated by being worked 16 or 17 hours a day. The young persons class can only indirectly restrict the hours of adult labour by restricting the hours of the mill in which they are employed. The proposed class of young persons will either greatly hamper the industry by restricting the working hours of mills or where they do not do that will be ineffectual in preventing the sweating of adult workers. The proposal of my colleagues will impale the industry on the horns of a dilemma. A more disastrous proposal it is impossible to think of.

It is proposed that any mill which declares its working hours to be 12 a day should be exempted from all obligation to get its young persons medically examined and certified or to keep a separate register of young persons. And at the same time it is proposed that certain departments of these mills which have declared a 12-hour day, such as the boiler room, calendaring, etc., should be exempted from the operation of the 12-hour

working day declaration. In other words certain departments of such mills will be permitted to work more than 12 hours a day. What is to prevent mill managers from employing young persons in these departments for more than 12 hours a day. The Factory Inspector will have no evidence that any operative in such mills is a young person, for there is neither medical examination nor registration of young persons in such mills. If the Inspector suspects any one to be a young person who is employed in calendaring for more than 12 hours a day it is open to the mill manager to say that to the best of his knowledge and belief that operative is over 17 and consequently a fully mature adult. Where is the protection for young persons under such an arrangement, not to speak of adults.

The proposal of the majority of the Commission to create a class of young persons has found favour with very few of the millowners, agents, managers, civil surgeons, Government officials, or other witnesses who gave evidence before the Commission. The majority of the witnesses were cleverly cross-examined by some of the members of the Commission with a view to elicit their opinions as to the advisability or otherwise of creating a class of young persons with hours restricted to 12. And witness after witness rejected the proposal, and many said that if any restriction is to be imposed by law they would prefer a direct restriction of the hours of adult labour to the creation of the proposed class of young persons. To say that the witnesses did not clearly understand the point put to them is not complimentary to the intelligence of the witnesses who appeared before us or to the powers of lucid exposition of the majority of the members of the Factory Commission. As a matter of fact the point was very clearly put to the witnesses and they thoroughly understood the intention and effect of the proposal.

But the result of the long cross-examination on this point is that out of something like 78 witnesses examined by the Commission on this point 22 have given their support to the creation of a young persons class with hours restricted to 12. Comprised in this 22 are 7 millowners, 9 mill managers, and 6 others. Comparing these figures with the 16 millowners, 42 mill managers, and 39 others who supported the direct restriction of adult hours, I do not feel that I have done anything by preferring the direct restriction to the indirect means and uncertain result of the young persons class to deserve the designation of "impracticable theorist." If I am an impracticable theorist I am glad that I am in good company. For the Government of Bombay in their note to the Factory Commission say:—"Government has no proof that the creation of such a class (young persons) is necessary. If the object is to secure shorter hours for the adult workers it might involve less interference if a direct legal limitation of hours were imposed. This course would involve less interference and cause less trouble to all concerned." That opinion given by the Government of Bombay, which of all the Local Governments of India had perhaps the most to do with factories, I am quite content to accept.

The suggested class of young persons, will not curtail the hours of working of the majority of textile mills to 12. Speaking generally,

this class is not wanted by millowners, mill managers, mill operatives, or others. A few instances of young persons detected by the Commission who were unfit for a full day's work could easily be met by enforcing a physical fitness test before a half-timer becomes a young person. The proposed class will serve no purpose except perhaps to help the manufacturers to put off "the evil day" when restriction of the hours of adult labour is certain to come. A young persons class and the policy of *laissez faire*, so far as adults are concerned, are all right in England where the adult workers know how to combine and protect their own interests. But in a country where the workers are illiterate, with little or no combination among themselves, with no education to enlighten them, with no capable leaders to guide them, and no franchise to protect them, the State must either step in and protect the helpless workers or stand by and watch the gradual breakdown and ruin of the labouring classes entrusted to its care.

My colleagues are emphatically of opinion that the labour conditions in India are not in any way comparable with those existing in the United Kingdom. And they say: "We strongly deprecate any attempt to apply the laws and regulations governing factory labour in the United Kingdom as such to India." These are excellent sentiments, and I cordially agree with them. But what is the creation of a young persons class with limited hours of work but a blind copy of the English Act? What is the attempt to curtail the hours of labour of adult labourers by the indirect means of curtailing the hours of work of young persons and women, but a repetition of the methods of English Factory Legislators? And above all what is the objection to the restriction of the hours of adult labour but an echo of the plea of English capitalists who have desperately clung to the antiquated *laissez faire* doctrine of the Manchester school of political economists. "Why should the hours of adults be restricted here? It is not done at home" is a statement I have heard more than once in the course of these inquiries. The reply to that question is furnished by the admirable principle enunciated by my colleagues but which unfortunately is not exemplified in their proposals.

Having disapproved of the suggestion for the creation of the young persons class with hours restricted to 12, I now beg to put forward the proposal to restrict the working hours of all male labourers in factories to 12 a day. I believe this proposal, if adopted, will put a stop to the long hours the operatives are now being worked in the textile factories in India.

Legislative restriction of the hours of adult male labour.

This is one of the recommendations made by the Textile Factories Labour Committee which was presided over by Sir Hamilton Freer-Smith. I entirely concur with the opinion expressed by that Committee on this point. But in the course of our investigations many witnesses who were connected with the textile industry, and some who were not, objected on principle to any legal restriction on adult male labour. These gentlemen evidently held the view that the State ought not to interfere with adult labour no matter what the conditions were under which such

interference was contemplated. Some witnesses travelled from principle to precedent and maintained that since such a thing as restriction of adult male labour had not been done in any country in the world, it ought not to be done here. The appeal to both principle and precedent seems to have been made under a grave misunderstanding. None of the great writers on the subject has ever denied the right of the State to interfere with adult labour under certain conditions. Even Adam Smith, who has been very much misunderstood on this point, admits the right of every man to pursue his own interests in his own way only as long as he does not violate the laws of justice. Both in France and in Switzerland adult labour has been the subject of legislation. In the former country the hours of adult labour have been restricted to 12 and in the latter to 11. In Switzerland there is a clause in the federal constitution of 1874 giving the Confederation the right "to enact uniform regulations upon the work of children in factories, upon the duration of the work of adults therein, and for the protection which should be accorded to work people employed in unhealthy and dangerous industries." Even in England State interference with adult labour is not unknown, although as yet it has been exercised to a very small extent. I believe that in England operatives working in bisulphide of carbon (used in the vulcanising of India rubber) are restricted to 5 hours of work a day by special rules; and similarly I understand that in lead-smelting works only a two hours' spell is permitted in the flues. And the Railway Regulations Act of 1895 gives the Board of Trade power, whenever it considers the hours of labour of any railway servants too long, to require the Railway Company to prepare a new schedule of hours to the satisfaction of the Board, under heavy penalties for non-compliance. There is scarcely any necessity to go further into these precedents. Even in the absence of any precedents, under the special circumstances of a country it may be justifiable to undertake legislation to control the hours of labour of its adult factory operatives.

Want of combination among the operatives.

Now what are the conditions existing in India which necessitate State interference. In the first place there is little or no combination among factory workers. This has been acknowledged on all hands. The Collector of Bombay in his letter to the Bombay Government, dated 25th November 1905, observes:—"If the millowners desire to increase the hours, the operatives have no real power to prevent them. Their power of combination is as yet exceedingly limited; a large proportion will always continue to prefer to get as high wages as they can, regardless of their own welfare in the long run; and finally the system of withholding pay and of inflicting fines render the great mass of the workmen helpless to resist the far more intelligent class which exercises authority over them. Legislative sanction and official inspection can alone enforce short hours and punish the non-observance of them." This opinion of the Collector of Bombay—the man on the spot—is practically corroborated by the opinion of the majority of the Commission who say that the operatives "are as yet unable to combine over any large area with the object of securing a common end by concerted action." The explanation of the fact that although excessively long hours were worked

in the Bombay mills on pay which was inadequate for the altered circumstances of the case, the operatives remained quiet and submitted to the long hours, is plain. It was due to their absolute helplessness to enforce a reduction of the working hours. Owing to want of combination the stronger and more avaricious among the operatives would remain on and work the long hours in order to earn all they can. The weaker among the workers who are both unable and unwilling to work the longer hours have no means of compelling their employers to reduce the number of working hours. They were disorganised units who had to choose between two evils—either to work the long hours or to give up their work. That is where the tyranny of the existing conditions comes in.

It is true that here and there isolated strikes take place in mills and sometimes the strikers get what they want. Is it not a well-known phenomenon in the industrial world that in times of great demand employers readily give in to strikes or even threats of strikes? And do they not when the demand slackens once again take prompt steps to regain lost ground? For all practical purposes the Indian mill operatives are without effective combination among themselves to act together in an emergency to secure a common end. And unless workers are protected either by combination among themselves or by the interference of the State, acting merely as individual units, they are placed at a considerable disadvantage in bargaining with their employers. With little self-confidence and less education the theoretical "freedom" of the Indian mill operative is very delusive. Through his weakness of will, ignorance, and his habit of submission to his social superiors, the Indian operative in his bargaining with his employer loses all the advantages of free competition, and suffers deep and permanent economic injury.

Physical deterioration.

Secondly.—That existing conditions are injurious to the health of the operatives. I have already explained at length my own views and observations on the subject. The majority of the members of the Factory Commission also admit in their report that "if the life history of a considerable number of the operatives working under these conditions could be traced to its close, it is probable that there would be evidence of premature exhaustion." They also express their opinion "that the very long hours worked in many mills in the past and in some mills at present are calculated to produce physical deterioration; if generally adopted or persisted in for any length of time they would undoubtedly result in the physical deterioration of the operatives." So with the strong suspicion that these long hours have already affected the physique of the operatives, and with the certainty that if persisted in they will result in the physical deterioration of the workers, it clearly becomes the duty of the State to effectively prevent these long hours. And as I have pointed out at length that the remedies suggested by the majority of the Commission will not restrict the hours of all textile mills within reasonable limits direct restriction of adult hours becomes an absolute necessity.

Thirdly.—The workers are practically unanimous in asking for a legislative restriction of their hours of labour. The evidence of the operatives taken by this Commission points that way. And the evidence taken by the Textile Factories Labour Committee also indicates it. The workers themselves on more than one occasion have submitted memorials to His Excellency the Viceroy praying for legislation to restrict their hours. Their last memorial was, I believe, dated 24th September 1905. The evident desire of the workers for restricted and fixed hours and their absolute helplessness to secure them without legislation constitutes another strong ground for State interference.

Opinions of operatives on legal restriction.

Fourthly.—In India it is not only the mill operatives who desire to bring down the working hours within reasonable limits but the millowners are also desirous of achieving that result. The resolution of the Millowners Association on more than one occasion to curtail the working hours in the mills in Bombay and their failure to carry it out is another extraordinary circumstance which justifies, nay calls for, State intervention. There are millowners who would voluntarily curtail the working hours in their mills but are afraid of the competition of others who may work long hours. These are precisely the conditions which wise statesmen have declared to justify State interference. In the Life of Cobden, the distinguished biographer uses these words, "Can the relations between labour and capital be safely left to the unfettered play of individual competition?" The answer of modern statesmanship is that unfettered individual competition is not a principle to which the regulation of industry may be entrusted. There may be conditions which it is in the highest degree desirable to impose on industry, and to which the public opinion of the industrial classes may be entirely favourable. Yet the assistance of the law may be needed to give effect to the opinion because—in the words of the great man who was now preparing the exposition of political economy that was to reign all through the next generation—only law can afford to every individual a guarantee that his competitors will pursue the same course as to hours of labour and so forth without which he cannot safely adopt it himself.

Opinions of employers on reduction of working hours of mills.

These are the grounds on which I recommend legal restriction of the hours of adult male operatives. It has been pointed out that it would be impossible to carry out the restriction of adult labour in India, as the number of exceptions to be granted for overtime working will be enormous, and the number of Inspectors required to enforce the restriction will also be great. The difficulties under both these heads are in my opinion exaggerated. What the cases are in which overtime working ought to be permitted must be carefully drawn up in consultation with experts who are familiar with the wants and methods of each industry And in India it would be more practicable to lay down that permission must be obtained from the local authority to work overtime. The Swiss rule of obtaining permission from the local authority will be more suited to the conditions existing in this country than the French

rule of making the Factory Inspector the authority to grant the extension. The local authority in India will have to be the Collector or the Divisional Officer. Even with an absolute adult restriction in Switzerland the Factory Inspector or his assistants or all together do not visit a factory, on an average more than once or twice a year.

We have heard a great deal about adult restriction hampering the infant industries of India. The question of the effect of a 12-hour day on production has been clearly dealt with in the report of the majority of the Commission. Indian experience in this respect coincides with the experience of other countries that reduction of the number of working hours does not necessarily mean decreased production. Curtailment and fixation of the hours of labour may on the contrary give better production and would, certainly, eventually tend to more uniform output and, to some extent, assist in modifying the serious fluctuations of business which are baneful alike to master and man. At the present time when the cry of industrial regeneration of India is in the air it may not be a very popular policy for an Indian to advocate restrictive industrial legislation for his country. But I doubt it, to shout with the biggest crowd is always the wisest course to pursue. I feel convinced that those of my countrymen who have bestowed any thought on the subject will approve of my proposal. Mere increase of wealth will not solve the problem of the poverty of India unless something is also done at the same time to alter the proportions in which the wealth is distributed. In the anxiety to increase the national wealth, to sweat and crush the labouring classes will certainly not help to further a more equitable distribution. I must also in this connection confess, with shame, that in my tour throughout India I found that my countrymen as a class were more unsympathetic and hard employers of labour than the European manufacturers. Of course there were many notable exceptions. But speaking generally the labourers fared worse under Indian employers than under the European. Even some of the most enlightened and educated Indian gentlemen, with whom I discussed industrial questions, had not a single word of sympathy with the labourers to express. They were all anxious to make up for lost time and to push on their industrial ventures and to accumulate wealth. But as for the workers, they were part of the machinery of production and nothing more. To me this discovery came as an unpleasant and disheartening surprise. But it is the truth, and, in my humble opinion, it will be an act of doubtful political wisdom to leave the many hundreds of thousands of Indian labourers to the tender mercies of the manufacturers who are supposed to be nursing the infant industries of India. I beg to submit with all the earnestness I can command, my recommendation to extend to the mill operatives in India the legislative protection which they so earnestly pray for, and which, God knows, that they so sadly stand in need of.

Section II.—*Women.*

The next point on which I differ from the majority of my colleagues is the raising of the hours of labour for women employed in factories

from their present limit of 11 a day to 12 ; and the reduction of their present hours of interval or intervals amounting to 1½ hours to ½ an hour.

This was one of the main questions to the Indian Factory Commission of 1890. A majority of that Commission strongly recommended that no restriction should be put on the working hours of women, and were of opinion that it would be very hard on the poor women labourers to be told that they could not work for " 12, 13, or 14 hours." Mr. Sorabjee S. Bengalee, C.I.E., one of the members of that Commission, strongly dissented from the view of the majority on this point. In the debate on the Factory Act Amendment Bill in the Viceregal Legislative Council in 1891, some of the representatives of the manufacturing interests strongly supported the opinion of the majority of the Commission. But the Government adhered to their proposal to restrict the hours of adult women to 11 a day and that proposal became law. Now, my colleagues make the proposal—in my humble opinion a retrograde proposal—to raise the hours of labour for women to 12 and reduce their hours of rest from 1½ to ½. This proposal evidently is based on a new discovery and an old argument.

The new discovery is that the factory women in India are all of good physique, that in the majority of cases they work less than the maximum of 11 hours a day, they are permitted to work, and in the opinion of some of the witnesses they are capable of working for 12 hours. But the excellent health of women factory operatives in India at the present time is the result of the short hours they are now worked. The majority of them are employed in hand reeling and are paid by piece work. Their irregular attendance does not interfere with any other labourers in the mill or with the progress of any manufacturing process. So they come when they like, go when they like. The reeling room containing no dangerous machinery they in some cases bring their infants along with them to their working room. All these arrangements are very suitable to women's work in this country, and so they are the one class of factory operatives in India who have managed to earn their living without ruining their health. For this blessing the factory women in India are indebted to the Factory Act of 1891 which was passed against the opposition of the manufacturers. The new proposal regarding women, if carried out, " will increase her hours and her health destroy. " And this retrograde measure is to be taken because it is alleged that restricted hours for women handicap them in competition with men, and that if women's hours are made the same as those for men, they would have the chance of getting employment in all the departments of a textile mill, instead of being confined to one or two departments as at present. The argument that restriction of the hours of women does injuriously affect them in competition with men is a very old one, the fallacy of which has been exposed times without number. Curiously enough the argument always proceeds from manufacturers. Men and women in Indian factories do not compete for the same employment. In the few instances of some mills in Upper India where men and women are employed side by side in the reeling room we have come across a number of instances where women in spite of their restricted hours made more money by piece work than their fellow male reelers. The large majority of factory women

in India will never under any conditions work alongside of men in the spinning room or weaving shed. A small percentage of low caste women like the pariah women in Pondicherry may accept work in all the departments of a mill and work alongside of men of all castes. But the large majority never will. And in the case of the minority the present opportunities they possess of attending to their household duties and of nursing their babies will be practically lost. At present whatever the hours of starting and stopping of a mill may be, women seldom turn up before 7 and seldom stay at their work after 6. This gives them time both in the morning and evening to attend to their household duties. In many mills the women workers do not take advantage of the 1½ hours' rest they are entitled to under the law. They voluntarily give it up for the privilege of coming late and going home early. It is one of the rules in Switzerland that women workers may either have a long interval and work the full number of hours permitted for women or have a short interval and go home earlier. The women workers here have unconsciously adopted the Swiss rule and in most cases have given up their long interval of rest in exchange for a late start and an early finish. The contention that under the proposed rule the hours during which a woman will be away from home are decreased rather than increased is a thereotical statement which does not hold good in practice. Will any manager permit a woman spinner, let us say, working in the ring frames, to turn up for work at 7 A.M. when the mill starts work at 5-30 A.M. The entrance of women into the work of all the departments of a mill will necessarily bring them under stricter discipline as to hours of attendance and so forth, and if along with this their intervals which now amount to 1½ hours a day is also cut down to ½ an hour, their health, their domestic and maternal duties will all be affected at the same time. In general competition with men if women suffer, they do so from their deficiency in industrial capacity and technical skill. And these defects cannot be corrected by longer hours, for long hours and good work are rather antagonistic than concomitant. The proposal of the majority is calculated in my humble opinion to do a great deal of social and physical evil to the women workers without appreciably improving their economic condition. Women workers in ginning factories which are not under the Factory Act and whose hours are not restricted are not one bit better off than the women in ginning factories which are under the Act. The former have to work for 16 and 17 hours a day for their 3 annas, while the latter can earn the same wage in about 12 or 13 hours, which by a series of intricate calculations can be proved to be equal to 11 hours.

I protest against this proposal on physiological, economical, and eithical grounds. It will be a great calamity if the present hours of work for women in factories were to be increased or their authorized hours of rest cut down.

Women in ginning factory.

Another proposal of the majority of the Commission regarding female labour from which I feel compelled to dissent is the proposal to permit night work for women in ginning factories. The objections to the employment of women at night in factories in general applies with equal force to their employment in ginning factories. The injury to

health, the disruption of domestic life, neglect of children all come into operation whether a woman is engaged in a spinning mill or a ginning factory. In addition to these, attempts against her chastity are likely to be more common outside the ginning factories, which are generally solitary structures in lonely parts of the country. When we were inspecting one of the rice mills in Rangoon a number of Madrasee cooly women employed in that mill complained to me that when they worked during nights at the mill they were often molested by men labourers whenever they went to the latrines in the dark. The obvious reply to this will be why don't they complain to the mill authorities.

But any one who knows the difficulties that a poor cooly woman has in proving her allegation before the authorities will recognize the probability of her more often failing to establish her case than of securing the punishment of the culprit. It is not an uncommon result in such cases for the women complainant to come out with her moral reputation damaged and for the cowardly male assailant to escape all censure or punishment. Under these circumstances the factory women in India employed at night has either to give up her work, or like the generality of her sex, excepting the suffragettes, to suffer in silence. The hardships and injustice of making women work in factories at night are very great, and before a proposal to employ them at night is made, sufficient justification ought to be shown. Now, what are the grounds on which the proposal is made? It is stated that the busy season in ginning factories is short, and the work in them is both easy and adapted for women, and that if women are prohibited from working at night it will be difficult or almost impossible to find men to work at night in the ginning factories. But none of these reasons explains the necessity for work at night.

To a very large extent—there may be exceptions—the necessity for night work is artificially produced. It is not altogether the result of large quantities of cotton coming to be ginned all of a sudden and the factories in the district finding themselves unable to cope with the work extending their operations through the late hours of the night into the early hours of the morning. In most of the ginning centres in India there is a system of combination among gin owners, where they pool the profits whether they work their factories or not. Under such a system "it is not uncommon," says Mr. J. Walker, I.C.S., C.I.E., Commissioner of Nagpur, "in a town containing several ginning factories for one or two to be working by day and night shifts, and for others not to be working at all, but to be sharing in a pool of earnings." Such night working Mr. Walker condemns as unjustifiable. And it will be found that night work in ginning factories prevails most in those districts where there is combination among owners. Mr. R. D. Bell, I.C.S., Assistant Collector of East Khandesh, in his evidence before the Factory Commission urged that night work in ginning factories ought to be permitted for women as it was a necessity. But in cross-examination he admitted that "there were more gins and presses in East Khandesh than were necessary for the cotton crop there, so there was no great necessity to work at night." Then again take the Punjab where there are a large number of ginning factories with very little of combination-

Mr. Hamilton, I.C.S., representing the Government of the Punjab, stated before the Factory Commission that the normal working hours all over the Punjab in ginning factories were from 6 A.M. to 7 P.M. with 1 hour's interval in the middle of the day, or a 12-hour day with little or no night work. The question, therefore, arises as to whether when a rule declaring, that women ought not to work in factories at night, is generally accepted any departure from that ought to be made to help any combination among gin owners formed with the purpose of artificially forcing up ginning rates? I am of opinion that no such departure ought to be allowed from the general rule. Ginning factory owners are at perfect liberty to combine and to work or not to work their factories. But they must abide by the rules laid down for the guidance of factories in general. Mr. H. W. J. Bagnell, I.C.S., the Collector of Broach, in which district there are a large number of ginning factories, deposed before this Commission to the effect that night work for women in ginning factories ought to be absolutely prohibited. And he further said that in his district there were plenty of male labourers available for night work in ginning factories provided the owners were willing to pay proper wages.

But at the same time I must admit that some important witnesses have advocated night work for women in ginning factories under certain conditions. Mr. P. Hemingway, I.C.S., Deputy Commissioner of Wardha—another important ginning district—has deposed that the "employment of women at night need not be prohibited. But if it is allowed, I would strictly enforce shifts with short working hours and frequent intervals." Even Mr. Walker, Commissioner of Nagpur, concedes this point so far as to say that "to meet cases of genuine emergent pressure, as to the genuineness of which inspectors would have first to satisfy themselves, inspectors might, I think, be authorized to grant special permission for women to work at night for a period not exceeding one month in one year."

Thus even those who are in favour of night working for women—except gin owners—are for taking efficient and stringent safeguards to prevent women being worked 17, 18, or even 20 hours. But the majority of the members of this Commission do not want even such efficient safeguards, and they are prepared to pass a general rule permitting night work for women in ginning factories. They recommend no ascertained shifts but are satisfied with a sort of spurious shift which is utilized in the Khandesh district. The "Khandesh system," I believe, owes its important public recognition to the mathematical genius of one of its ex-Collectors who reduced it to a mathematical formula. He ordered that the proper number of women to be employed in any ginning factory would be represented by the formula—

$$\frac{g \times h}{11} = w$$

where g represents the number of gins in the factory, h the total number of hours the factory works, 11 the number of hours a woman is allowed to work under the Factory Act, and w the total number of women to be employed.

As a mathematical formula it is excellent. But in my humble opinion it has absolutely failed in its practical application, because the mathematical Collector of Khandesh failed to take into consideration the human element involved in his problem. And the human element when it appears in the shape of a ginning labour contractor and his mukhadamie is enough to upset a dozen mathematical formulæ. These disturbing human elements were able to produce registers with the names of the necessary number of women required by the Collector's formula. But the actual number of women available for work in the gins was considerably less. If I may represent it by a formula it was—

$$X = W - (S + r)$$

where w represents the women who ought to be available for work S represents the number of sweepers who are put on the register but never work in the gins, r represents the female relations of the mukhadamie who are also put on the register but who have not the remotest intention of working in the gins, and x the number of women who are sweated to keep the factory going for 16 or 17 hours.

When we were in Jalgaon, the capital of the district where the mathematical formula came from, we were living in our train which was drawn up at a siding. There was a ginning factory not 100 yards away from our train. One morning when it was still dark I heard the engines of the factory going. I lighted a match and looked at my watch. It was 5 o'clock. That factory worked all that day, and at night when the members of the Commission were enjoying their after-dinner smoke the engines of the factory stopped. One of the members pulled out his watch and said it was half past ten. That factory had gone on working for 17½ hours. We visited that factory the next morning and found actually at work enough women to keep the gins going but in a register found a number of other names of women. When asked where they were we were told that they were in their houses. When asked if there was a definite time when a definite worker would be at work or at home it was replied that there was no difinite arrangement like the one suggested, but the extra women came and relieved those at work when they pleased and as they pleased. This is the system which my colleagues think is working satisfactorily in Khandesh. If my colleagues are satisfied with it, I certainly am not. And if the proposal to grant legal recognition to the Khandesh shift or makeshift is accepted, then it will be equivalent in my humble opinion to legalising sweating. My colleagues are good enough to say that their proposal is open to theoretical objection. The Factory Inspector, Mr. McCormack, deposed before the Commission that in Khandesh the time tables drawn up by the gin owners and approved by the authorities "were not worked up to." And if the gin owner did not evenly distribute the work among the women on his list but made one poor woman work for 17½ hours while permitting the mukhadamie's second cousin to sit comfortably at home, how is the Factory Inspector to find it out. This may be a theoretical objection to the

majority of the members of the Factory Commission, but will be unpleasantly practical to the Inspector who wants to discharge his duties in a conscientious manner.

I am convinced that the greatest abuses of any in the factories in India exist in the ginning factories and especially in the smaller ones. And the abuses become all the more horrible as the sufferers here are all women. There are enough of ginning factories in the different ginning centres of India to deal with the cotton produced in these centres at present. And they are every day springing up like mushrooms, to open the factory, to come into the combine, then to shut down the factory and come in for a share in the profits of others in the combine who have actually worked. If every factory is worked for 12 hours a day throughout the season there will be no necessity for night work at all. I am strongly against the proposal to permit women to work at night in any factory whatever.

Section III.—*Young Persons.*

The third point on which I differ from the majority of members of my Commission is as to the necessity for the production of a certificate of physical fitness before a half-time child is allowed to work full time. The present proposals are to make the hours of half-time children 6 hours, and of young persons 12 hours a day. The transition comes at the age of 14, at which a child which had till then worked for six hours a day is all of a sudden to be made to work 12 hours a day. The jump is too high and the risks of physical injury great. In my humble opinion such jump ought not to be taken without a previous medical examination to ascertain whether the young person who is about to attempt to do twice the amount of work which he had been doing till then is physically fit to undertake such arduous labour. Poverty may compel many young man to attempt to do things beyond his strength. Such attempts at gradual self-destruction ought to be checked. I have seen in our recent tours all over India certain number of young adults working in mills who though they were undoubtedly over 14 years of age were not fit to do a full day's mill work. It may be said that cases like those are few and constitute only a very small percentage of the total number of young adults working in the many mills in India. In other words the percentage of young adults who have ruined their health by attempting to do work beyond their strength is so small that it may be neglected. That is the frame of mind in which a manufacturer looks at damaged goods. But here we are dealing not with cotton cloth or woollen material or chemical substances but the damaged items are human beings. In my humble opinion it is the duty of the State to safeguard the health of every one of its subjects. The proposal to exempt mills which declare a 12-hour working day from all obligation to differentiate in any manner between young persons and mature adults may be exceedingly convenient to millowners and mill managers. But if Government permit such a proposal to become the law of the land they would fail in their duty of safeguarding the health of the many thousands of immature mill operatives all over the country. As a medical man who has had

opportunities of seeing mill operatives all over India, I beg to strongly recommend that no young person (*i.e.*, any one between the age of 14 and 17) be permitted to do more than half a day's work in any mill until such person has been certified by a recognized certifying surgeon to be physically fit to do a full day's work.

SECTION IV.—*Children.*

I agree with all the proposal made by the majority of the Commission regarding the employment of children. The reduction of their hours of actual employment to 6 per day, the prohibition of their employment at night, and before they are certified both as to age and physical fitness, the arrangement of their sets and the facilities to be afforded for their education have all my cordial approval.

Outside labourers in factories.

The question as to what classes of labourers are factory labourers who come within the operation of the Factory Act, and what classes are to be considered as outside labourers who are not controlled by the provisions of that Act, is one more of interpretation than of legislation. The labourers who come into a factory either to bring in raw materials or to take away the finished product of the factories, ought not, in my opinion, to be classed as factory operatives, whether they are employed by any contractor or by the millowner himself. But at the same time the decision that the coolies in rice factories who empty their baskets of paddy into the hoppers, directly, are not factory hands because they never go inside the factory building is a legal hair-splitting which I am unable to follow. And when a distinction is drawn between coolies who feed the hoppers with paddy brought from the mill godown, and those who feed them with paddy brought direct from the barges, it is a distinction, to my mind, without a difference. However, as I have already observed, it is a question of interpretation. But I feel that whatever may be the interpretation put on the expression "outside labourers" all factories ought to be treated alike in the facilities they are afforded for the bringing in of their raw materials and sending out of the products of their manufacture. I see no reason why the ginning factories and rice mills should be the spoiled pets of the Factory Act.

Minor recommendations.

I entirely agree with my colleagues in all the minor recommendations they have submitted. And if I add a few remarks on some of them, I do so more to amplify than to criticise.

Latrine accommodation.

I agree with the scale of latrine accommodation proposed by the majority of the Commission. But as the member of the Factory Commission who had most to do with the inspection of latrines, I feel that my duty does not end with a proposal of a scale for the number of latrine seats to be insisted on. In the course of my inspections I came across a large number of mills which although provided with a sufficient number of latrine seats to satisfy the existing provisions of law, were yet keeping their latrines in such an insanitary condition as to be positively injurious to the health of the operatives who had to use them. Many

of these latrines were conserved by the local municipalities. And mill managers when taxed with keeping their latrines in such an insanitary condition blamed the municipality for not attending to their conservancy arrangements properly. In one instance the mill manager was even good enough to show me a large file of his correspondence with the local municipality on this vexed question. The correspondence was highly interesting and fairly vigorous, but had no effect in mitigating the insanitary condition of the latrines. The Factory Inspector was practically helpless in the matter, as it would be obviously unfair to proceed against the occupier of the factory when the question of the responsibility for the insanitary condition of the latrines was still a subject of controversy between the millowners and the municipality. The subject is, however, one which cannot be left to be fought out between these contending parties. In my opinion some definite rules ought to be made and strictly enforced by the Local Governments. I see no reason why mills situated within municipal areas with a drainage system on the water carriage principle, should not be compelled to connect their latrines with the town drainage system with efficient arrangements for flushing. And in this connection, although I have no intention of dissenting from the proposal of my colleagues, I think it would be advisable to arm Local Governments with authority under the Act, which they do not at present possess, to insist on separate urinal accommodation wherever it is considered necessary. To insist on separate urinal acommodation in an isolated ginning factory situated in the middle of up-country fields will no doubt be a vexatious proceeding. But to compel the operatives in a large mill, say for instance in Bombay, to go inside not altogether clean latrines when urinal would have answered their purpose equally well, if not better, and expose them to all the injurious influences of excretal emanations, seems to be taking risks rather unnecessarily. At least, my sanitary conscience revolts against it. I only mention these facts in order that Local Governments may be empowered under the Act with authority to deal with possible contingencies.

Water-supply.

The supply of drinking water to the mills is another subject to which I have paid careful attention during my inspections. A large and readily available supply of good drinking water is the most essential thing in an Indian mill. The climate and conditions inside the mill are such that operatives constantly have to come out to drink water. And I have been struck with the enormous quantity of water which the average Indian operative consumes in a day. The majority of the mills I have visited have a good and adequate supply of drinking water stored somewhere within the mill compound. But I have come across a good many mills where there was no drinking water stored, but they merely had the municipal water pipes laid with delivery taps. Municipal water supplies and even "constant" supplies are apt to fail sometimes. And if the water-supply to a large mill fails in the middle of a hot summer's day, and if there is no water stored within the mill compound, the sufferings of the mill-hands will be cruel. The draft Act submitted by the majority of the Commission does say

"that in every factory there shall be maintained a sufficient water-supply for the use of the persons employed in the factory." That is sufficient for the Act. But I have heard it interpreted that the mere introduction of municipal water-supply into the mills satisfies the condition of maintaining a sufficient water-supply. And, as I have already observed, many mills acting on this principle have not provided for any storage of drinking water.

I would suggest that rules should be framed under the Act making it obligatory on millowners to store at least 2 gallons of drinking water for every operative employed in the mill.

Administration of the Factory Act.

With all the proposals made by my colleagues for the efficient administration of the Factory Act I concur. Whether a Chief Inspector of Factories appointed by the Government of India, but who in respect of factory inspection in each Province is directly subordinate to the Local Governments, will be able to prevent the administration of the Factory Act from gradually becoming centralised under the Government of India, is an administrative question which I am not competent to discuss. But, holding as I do, that factory administration ought not to become centralised, I would place on record my emphatic opinion that if there is the remotest chance of the appointment of the newly proposed Chief Inspector leading to any centralisation of the administration of the Factory Act in the Imperial Government then the appointment ought to be done away with. In my opinion the advantages of having a Chief Inspector who would help to introduce uniformity in the administration of the Factory Act all over India will be more than counterbalanced by the disadvantages of centralism which the Chief Inspector may unconsciously bring about.

I agree with all the other recommendations of the majority of the Commission.

I am entirely at one with them in opposing any legal recognition to the working of daylight hours as equivalent to working a 12-hour day. Such a concession may be justifiable in the case of mills situated at the equator. But in some parts of India as in the Punjab where in summer there are 14½ hours of actual daylight, with very high shade temperatures, the operatives could be actually worked for 13½ hours. I am strongly opposed to the system of "daylight" working. I prefer fixed hours.

I also join my colleagues in insisting on the certification of all children before employment. If any departure is made from this rule the way will be thrown open for unscrupulous jobbers to manipulate under-aged children.

If the facilities for certification proposed by the Commission are found to be inadequate in practice, I am sure that Local Governments will readily make arrangements for providing additional surgeons.

My friend the Hon. Mr. Vithaldas Thackersey has always been asking for more. When the Commission proposes a 12-hour day, a very liberal allowance, he wants 12½. I strongly object to any increase over 12

hours, and I feel sure that on this point the majority of my colleagues will be with me.

Conclusion.

I have ventured to submit a separate report dissenting from the views of my fellow members on the Factory Labour Commission because on all the important points referred to the Commission, except that relating to the employment of children, I found that my views were in entire conflict with those of my colleagues. I am perfectly conscious of the fact that I do not possess the practical knowledge of my manufacturing colleagues or the administrative experience of my official fellow members. But all the same I thought it my duty to place before Government my views on questions which I had the opportunity of closely studying during the time that I served as a member of the Factory Labour Commission.

As a medical man, a non-official, with no connection with manufactures of any kind, and above all as a native of India, my points of view will naturally be somewhat different from those of my colleagues. I have looked at the question more from the point of view of an ordinary humble citizen, of "the man in the street," who being neither a capitalist nor a labourer looks upon millowners and mill operatives alike as his countrymen. And if at times I appear to favour the mill labourer more than his capitalist master it might probably be due to the influence of the profession to which I have the honour to belong. I have attempted to investigate and study the questions referred for the consideration of the Factory Commission to the best of my ability. And the conclusions arrived at and embodied in this report are the result of serious study and sincere conviction.

I beg to submit this report for the consideration of the Government.

T. M. NAIR, M.D.

G. M. Press, Simla.—No. 2 C. & I.—9-6-08.—50—P.B.S.

APPENDIX A.

Points referred to the Factory Labour Commission on which the evidence of witnesses is desired.

(A) ADULTS.

(*a*) Should the working hours of adult males be limited, and has the physique of workers been affected by long hours?

(*b*) If hours are to be limited, what number of hours should be fixed, and what would be the best method of enforcing the restriction? Would it be advisable to prescribe—

(1) that, except when working by shifts, the legal working hours should be from 5-30 A.M. to 6 P.M. or from 6 A.M. to 6-30 P.M.;

(2) that the engine should be stopped for half an hour between noon and 2 P.M.; and

(3) that in factories working on the day shift system the legal working hours should be from 5 A.M. to 8 P.M., provided that no adult male should work for more than 12 out of every 24 hours?

In the alternative what hours, and what midday interval, would be suitable?

(*c*) As the result of the illegal employment as adults of persons between the ages of 12 and 14, has there been physical deterioration requiring the creation by law of a special class of workers intermediate between the half-timer and the adult, and corresponding to "young persons" under the English Act, whose working hours should be restricted?

(*d*) If it is considered inadvisable to create a class of "young persons," do you think it desirable that a special register of all workers under the age of sixteen should be maintained in order to facilitate inquiries as to the physical fitness of the youngest adults to work full-time?

(*e*) Should the employment of women at night be prohibited?

(B) CHILDREN.

(*f*) Should the minimum age at which children are allowed to work in factories be raised beyond 9?

(*g*) Should certificates of both age and physical fitness be required before children are allowed to work in factories?

(*h*) Similarly, before children who have hitherto worked half-time are allowed to work full-time as adults, should certificates of both age and physical fitness to work full-time be required?

(*i*) Should it be prescribed by law that children shall not be employed except in regular sets, whether morning and afternoon sets or double sets?

(*j*) Should factory owners be obliged to provide elementary education at their own expense for children working in their factories?

(*k*) Should a rule be made prohibiting non-working young children from accompanying workers to dangerous or unhealthy parts of factories? If so, how should such a prohibition be enforced?

(C) VENTILATION, SANITATION, ETC.

(*l*) Should an attempt be made by testing samples of air taken from factories in India, to prescribe an analytical standard of purity for air in factories, with a view to secure proper ventilation?

(*m*) Should a similar attempt be made to prescribe a standard of moisture for the air in factories, with reference both to manufacturing processes and to the health of the workers?

(*n*) Should a standard of purity be fixed for the water used for humidifying purposes?

(*o*) Should the standard of latrine accommodation be raised to one seat for every 25 workers, and should the provision of separate urinal accommodation be insisted on?

(*p*) Should it be prescribed that all doors of working rooms shall be hung so as to open readily from the inside outwards, in case of fire?

(*q*) Are further precautions for fencing machinery necessary in any factories or class of factories?

(*r*) Should arrangements be made to secure uniformity in the administration of the Factory Act throughout India?

(*s*) Should full-time medical inspectors of factories be appointed to assist the present inspectors in securing the due observance of the Act?

Questions for the Representatives of Local Governments.

1. What is the strength, the composition, and the pay of the factory inspection establishment in the $\frac{\text{Presidency}}{\text{Province}}$? In what manner is that establishment linked with the administrative machinery of the Government? Is factory administration supervised—and if so in what manner—by officers not forming part of the special factory establishment?

2. How is the factory inspection establishment recruited? Is there any system of training? Has the present system worked satisfactorily; and, if not, in what respects is it considered susceptible of improvement? Is it desirable that the Factory Inspectors should be recruited in the United Kingdom or that, in the alternative, they should be trained there?

3. Is the present establishment adequate? If not, what additions are considered necessary in order to bring it up to a proper strength?

4. It has been suggested that factory administration throughout India should be centralised, and that the direct and supreme control should be vested in the Department of Commerce and Industry. Is this suggestion approved?

5. Is the proposal to employ whole-time Medical Inspectors of Factories approved? If so, should their duties include the certifying of the ages of children in factories, or should that duty continue to be performed by Civil Surgeons as at present? What arrangements would be advisable for their recruitment and appointment? What staff would be required for the $\frac{\text{Presidency}}{\text{Province}}$, what pay is considered adequate, and should the Medical Inspectors be recruited and retained specially for factory work, or should they form part of a large service, such as the Indian Medical Service, or the subordinate Medical Service? Should they be permitted to take private practice, and in what manner should they be fitted into the administrative machinery?

6. The Commission would be glad to learn the opinion of the Local Government, based upon the information at present available, regarding the points referred to the Commission, a statement of which is attached. They would also be glad to receive any suggestions which the Local Government may feel disposed to make for the improvement of the existing law, or for securing its better observance.

Questions for Factory-owners, Agents, Managers, etc.

1. Will you kindly give the names of the factories you represent; also the numbers of men, women, and children employed in each.

2. Will you also state for how many days in each year, during the last 10 years, each of these factories has worked over 12½ hours a day, and what the average daily number of hours has been, for each year, during that 10-year period?

3. A statement of the main points referred to the Commissioner is appended. Will you kindly give your opinion on the questions raised, or on such of them as you are specially interested in, and which are not dealt with in the succeeding questions?

4. Can you provide the Commission with statistics showing the effect of working days of varying length (*a*) on the production, *per* spindle, of fine yarn, (*b*) on waste, and (*c*) on the economical working of a factory? This information, if available, might suitably be supplied in the form annexed. If not connected with a spinning mill, can you supply similar information in respect of the industry in which you are interested?

5. If certificates of physical fitness as well as of age be required prior to the employment of children on half time, will it, in your opinion, be necessary to prescribe some reasonable time limit within which the employé should be allowed to work, pending examination for a certificate? If this is considered necessary, what period would you suggest, the possibility of the abuse of the concession in certain cases being kept in mind? What arrangements do you consider necessary in order to secure the medical examination of half-timers, and of any other employés upon whose examination the law may insist, with reasonable despatch?

6. It is suggested, under point (*h*) referred to the Commission, that no half-timer should be permitted to work as an adult unless medically certified as physically fit for full-time work. Assuming that this recommendation is accepted in principle, are you of opinion that it could be applied in practice? What safeguards do you consider necessary and feasible with the object of preventing half-timers who are refused certificates as adults in the factory in which they have worked from obtaining employment as adults at some other factory?

7. Are you in favour of the suggestion under point (*c*) referred to the Commission, *viz.*, the creation of a class of "young persons" as in the United Kingdon? If so, what limits of age do you consider suitable? If the law be eventually amended so as to create such a class and to restrict their hours of employment, what effect do you anticipate this will have on the hours during which the factories are worked? Will the proportion of women, half-timers, and "young persons" be so large that, as a matter of economical working, the hours fixed for these classes of workers will in fact determine the hours during which the machinery runs? The Commission would be glad to have information as to the probable number of "young persons," assuming an age limit for that class of 14—16, employed in your factory.

8. It is suggested under point (*b*) referred to the Commission that definite time limits should be prescribed, within which only the employment of operatives would be legal. Assuming that it is eventually decided to restrict the hours of adult labour, should the restriction take the form proposed—the imposition of definite time limits beyond which no operative could be legally employed—or would it be preferable to fix a maximum number of hours, leaving it to the discretion of each individual employer to settle the time for the commencement and the termination of the day's work?

9. If you are of opinion that the special circumstances of the industry in which you are interested are such as to demand exceptional treatment in respect of any of the recommendations or suggestions included in the terms of reference to the Commission, will you kindly state these circumstances, and suggest the form of exception which you consider suitable?

10. It has been suggested that Inspectors from the United Kingdom should be obtained for factory work in India. Do you approve of this suggestion? And do you consider that, in any event, all Factory Inspectors should in future receive a considerable portion of their training in England?

11. Do you consider it essential that any law which it may eventually be decided to introduce, if more stringent than that at present in force, should contain provisions introducing a certain amount of elasticity in its actual operation? If so, have you any suggestions to make as to the general line on which these provisions should proceed?

12. Have you any suggestions to make as regards the housing of factory hands?

13. Are there any other matters which you wish to bring to the notice of the Commission?

Mill.

Working day of *	Production *per* spindle *per* hour of 10s. (Please state whether mule or ring spindle.)	Production of reeling yarn *per* spindle *per* hour of 20s. (Please state whether mule or ring spindle.)	Percentage of waste.	Period covered by these statistics.
12 hours.				
13 hours.				
14 hours.				

* Other working periods may be given, and it is particularly requested that such information may be supplied whenever available.

Questions for Owners, Agents, and Managers of ginning mills and cotton presses.

1. Will you kindly give the following information about the ginning mills or presses with which you are connected? :—

(*a*) name of mill or press;

(*b*) number of men, women, and children usually employed in each mill or press;

(*c*) period during which the mill or press usually works (giving approximate dates of commencing and stopping work);

(*d*) usual hours during which the ginning mill or press works ?

2. What is the average number of hours a person employed in a ginning mill or press works in 24 hours? Have they any intervals of rest in this time ?

3. Do you approve of the proposal to bring under the Factory Act ginning mills and presses, irrespective of the number of months they work in a year ? Please give full reasons for your reply.

4. It has been suggested that the employment of women on night work should be prohibited. Do you approve of this suggestion? Please give full reasons for your reply.

5. Assuming that it is decided to make the Factory Act applicable to all ginning mills and presses, do you think that any special provisions modifying the general law would be necessary in the case of ginning mills or presses? Please give full reasons for any suggestion you make.

6. It has been stated that, in a large number of ginning mills, the line shaft is inadequately fenced. Do you agree with this view, and do you see any objection to prescribing that the shafting must be cased in between the drums ? Should women be prohibited from working in front of the opener ? What suggestions can you make to prevent accidents from stones being hurled out from the opener, or from fires occurring there ? What accidents have there been in your mills or presses during the last five years ?

7. Are there any other matters which you wish to bring to the notice of the Commission?

Questions for Medical Witnesses.

1. A statement of the main points referred to the Commission is appended. Will you kindly give your opinion on the questions raised, or on such of them as you are specially interested in, and which are not dealt with in the succeeding questions ?

2. What class of factory operatives are you acquainted with ? Can you supply the Commission with statistics showing the relative healthiness of these operatives, as compared with the general average of the non-factory population of the same class ? Have you formed any definite opinion on this subject, as a result of your experience, although you may be unable to support that opinion by statistics ?

3. Is the factory population, in your opinion, below or above the general average of the same class as regards physique ? Do the operatives you are acquainted with suffer more than the general population of the same class from any specific classes of diseases, and can you supply any statistics regarding this matter ?

4. In the event of definite limiting ages being prescribed as regards certain classes of factory workers, what would in your opinion be the most suitable method, of general applicability, for the determination of the age of any particular examinee ? Can the dentition test be relied on in India ? What in your opinion is the average age at which the permanent teeth appear in Indian children :—

(*a*) Central incisors.
(*b*) Lateral ,,
(*c*) Canines.
(*d*) Anterior bicuspids.
(*e*) Posterior bicuspids.
(*f*) Anterior molars.
(*g*) Second ,,
(*h*) Posterior ,,

5. Is it your experience, based upon actual knowledge of specific cases, that the existing law as to the employment of children in factories is evaded, and, if so, to what extent, either by employing as half-timers children under 9, or by employing as adults children under 14 ? Can you give any statistical basis for your opinion ?

6. Are you in favour of the appointment of whole-time Medical Inspectors ? If so, what arrangements would you suggest for their recruitment and appointment. What pay should they receive, should they be recruited and retained specially for factory work, or should they form a branch of a large service such as the Indian Medical Service or the Subordinate Medical Service ? Should they be permitted to take private practice ? And in what manner should they be fitted into the administrative machinery ?

7. Do you consider the standard suggested by the Textile Factory Labour Committee for latrine accommodation—one seat for every 25 persons—suitable ? If not, what standard would you propose ?

8. Are there any other matters which you wish to bring to the notice of the Commission ?

Questions for General Witness.

1. A statement of the main points referred to the Commission is appended. Will you kindly give your opinion on the questions raised, or on such of them as you are specially interested in ?

2. Are there any other matters which you wish to bring to the notice of the Commission ?

APPENDIX B.

Demi-official letter from Lieutenant-Colonel C. Mactaggart, I.M.S., to W.T. Morison, Esq., I.C.S., President, Factory Labour Commission, dated Lucknow, the 18th March 1908.

As requested by you I submit the following memorandum on the medical part of the work of the Factory Commission in the Bombay Presidency.

My views are founded entirely on what I saw and heard in the Bombay Presidency, and it is quite possible that they might have been very materially modified had I had an opportunity of seeing the factory operatives in other parts of India. I have no tabulated figures before me while writing this report, and I may add that the state of my health is at present such as to prevent my writing much on any subject. I hope you will, therefore, accept a short report and pardon its imperfections.

While the Commission was in the Bombay Presidency I saw in Bombay, Ahmedabad, and Broach many thousands of factory operatives—men, women, and children. During the last 18 years it has been my duty to inspect large bodies of men and form an opinion as to their general health and physical condition, and in such work I certainly have had as much experience as almost any officer in the Indian Medical Service. Although therefore I cannot quote figures, I think the general conclusion which I have come to with regard to the physical condition of the factory operatives in the Bombay Presidency is entitled to considerable weight at the hands of the Commission. I am distinctly of opinion that the physical condition of the factory operatives in Bombay is in every way excellent, and that it compares favourably with that of agricultural labourers and men of the cooly class generally. The vast majority of the men and women working in the factories appeared to me to be in excellent health. They seemed well nourished, had healthy skins, and in very few cases did I notice any signs of malnutrition or of disease either hereditary or acquired. The marked absence of all signs of tubercular disease of glands or joints led me to think that tubercle, in spite of the assertion of one medical witness to the contrary, cannot be common among factory operatives in Bombay. Speaking generally and judging from the condition of the operatives, I have absolutely no reason to think that the hours of labour now in force in the Bombay factories have any bad effect on the health of the operatives.

Dr. Turner, the Health Officer of Bombay, submitted to the Commission figures, which appeared to have been very carefully prepared, comparing the health of the factory operatives and their dependants with that of other inhabitants of Bombay in the same class of life. I have not his figures before me, but my recollection is that they clearly shewed that the mortality among factory operatives was considerably lower than that recorded among the other classes referred to. Statistics require to be carefully examined and local circumstances carefully considered in judging of their value, but Dr. Turner's figures certainly gave me the impression of having been prepared with care, and taken in conjunction with the result of my own observations proved to me that the health of the Bombay factory operative is probably better and certainly not worse than that of other classes of similar social standing in the general population.

Some people may find it difficult to realize that the conditions under which the factory hand works can be as healthy as those under which the agricultural labourer or the cooly lives and labours, and probably in England and in many other countries they may not be so. In India, however, the conditions are different. I have had an opportunity for many years past of noticing the comparative health of large bodies of prisoners working respectively in factories and on extra-mural labour such as agricultural work, gardening, and general cooly labour, and I have no hesitation in saying that I have invariably found that the men employed on factory work are much more healthy and far less liable to disease than those employed on extra-mural labour. It was, therefore, no surprise to me to find that the factory operatives in Bombay were a healthy set of men. The only real advantage which the agricultural labourer and cooly has over the factory labourer, as regards the hygienic conditions under which he works, is abundance of fresh air. On the other hand the man working outside is much more exposed to the vicissitudes of a tropical climate than the factory operative is; he is obliged to work in the intense heat of the tropical sun in the hot weather, and in the cold weather is exposed to intense cold and damp while employed in such labour as irrigating rice and other crops. The work of the cooly and agricultural labourer, apart from exposure to the vicissitudes of climate, is also, in my opinion, much harder physical labour than that of the factory operative, whose labour, while it undoubtedly necessitates constant attention, can in no way be said to be physically hard work. Another factor, which undoubtedly has an enormous influence in conducing to good health among the factory operatives, is the fact that they receive very high wages and are able thus to

obtain far better food than the cooly or agricultural labourer can afford. I do not think that there can be any doubt that the lower classes in this country are habitually under-fed and that their health and physique therefore suffer. I am inclined to think that one of the chief reasons for the good health of the factory operative lies in the fact that he is well paid and well fed. While in Bombay we heard a good deal as to the drinking habits of the factory operatives, but I am inclined to think that the witnesses exaggerated when dealing with this matter, and I certainly noticed no signs of chronic alcoholism among the factory operatives. Native gentlemen, who by caste and religion are prohibited from touching alcohol, are, I think, frequently inclined to exaggerate when describing the drinking habits of even very moderate drinkers It is quite probable that most of the factory operatives in Bombay do indulge in a "tot" of liquor after their day's work is done, but they are well able to afford this luxury without depriving themselves of the necessaries of life, and I doubt if all the alcohol they drink does them any particular harm.

On the whole I must emphatically say that in my opinion it cannot be said with truth that the hours now worked in the Bombay factories have any injurious effect on the health of the operatives. Whether on social, moral, or political grounds it is advisable to take steps to limit the working hours for adult males in factories is another question, but my own opinion, founded on what I saw and heard while a Member of the Commission in the Bombay Presidency, is that there exist absolutely no real grounds, medical or otherwise, which would justify Government in directly limiting the hours of adult male labour in factories by legislative enactment.

I am in favour of the creation of a special class of "young persons" to include all males between the ages of 14 and 18 years of age, whose hours of labour should be limited to 12½ daily, inclusive of half an hour's interval in the middle of the day. While Government has, in my opinion, no justification for interfering directly with the working hours of adult males, I think it is right and proper that it should step in to prevent "*young persons*" from being overworked. While I do not think that, *at present*, in the Bombay Presidency "young persons" are overworked, I think there can be no doubt that they were overworked in 1905, and the same thing will happen again should trade revive and the demand for yarn rise as it did in 1905. "Young persons" between 14 and 18 are just those who are likely to suffer permanently from the effects of overwork even for a limited period. They are also the persons most likely to be driven to working for longer hours than they wish to work, and in any case they are, owing to want of experience, incapable of judging what is good for them as, we must presume, the adult labourer is. If a class of "young persons" is formed, as I suggest, their age must of course be certified and registers containing the names of those employed must be maintained in factories. This will certainly give rise to a good deal of trouble and an increase in clerical work in factory offices, but the due protection of "young persons," in my opinion, justifies the imposition of these inconveniences on millowners and managers. It might be enacted that in every case where a millowner admits that he employs young persons and undertakes that he will not work his engine for a longer period on any day than 12½ hours, including half an hour's interval, that he should be excused from maintaining any register of young persons, but any breach of this undertaking on the part of the millowner or manager, should be punished by a very severe penalty. I do not think it is necessary to have a certificate of physical fitness in the case of young persons, but the arrangement for certifying their age should be much the same as will afterwards be described when dealing with the case of "children." It has been stated, and probably with truth, that the effect of creating a class of "young persons" with limited hours of labour will be to indirectly limit the working hours of adult males as it will be impossible to work the mills profitably without "young persons." If such is the case so much the better. I see nothing dishonest in this policy. Its primary object is to protect those who require protection, *viz.*, the "young persons," and if it indirectly also protects adult males from over working themselves, through greed for extra pay, its effects will be all the more beneficial.

The women working in the factories seemed to me to be a particularly healthy lot and quite capable of working the same hours as I have suggested for "young persons."

The children employed in the factories appeared to me to be on the whole healthy and well cared for and quite capable of doing 7 hours' work daily. I do not advocate reducing hours of "half-timers" unless you decide on a 12-hour day for adults, or introduce a "young persons" class with a 12-hour day for them, in which case it would be well and prevent irregularities if "half-timers" were limited to 6 hours, *i.e.*, half the time of the adults or young persons. There can be no question but that the certifying of children for factory work has been carelessly done in the Bombay Presidency, and I saw large numbers of children obviously under 9 years, although certified as over that age, working in the mills. In my opinion it is absolutely necessary, if Government wishes to enforce the regulations as to the employment of children, that in places like Bombay and Calcutta, where there are a large number of factories, a full-time certifying medical officer should be employed. He should be paid by Government and should be strictly prohibited from accepting any fees from the mills.

In the smaller stations the certifying of children might be done by the Civil Surgeon, but in such cases also he should be paid by Government for any work he does and not by the mill-owners. The medical officer, besides certifying as to the child's age, should certify that the child is physically fit for factory work. I am strongly of opinion that no child should be permitted to work for a single day before it has been certified. If "days of grace" are allowed during which a child can be employed before being certified, the result will certainly be that children will be irregularly employed and that the provisions of the Act will be systematically evaded. Besides a thumb impression, every child's certificate should give two distinctive clear marks by which the child can be easily identified, and these distinctive marks should be entered by the medical officer with his own hand. Every child should carry his certificate on his person. The practice in the Ahmedabad mills shows that this can be easily done and the advantage to an inspecting officer of being able immediately to refer to any child's certificate is obvious. It should be laid down in any future Factory Act that children should work in two sets of six or seven hours as the case may be and that a register showing the names of the children working in each set should be written up daily and be ready for inspection by 8 A.M. The penalty for not keeping up this register should be severe and the responsibility for its upkeep should rest on the mill manager himself. Children should only be allowed inside the mill compound during the hours in which their set is actually supposed to be employed, and for example, any child of "B" set found within the mill compound during the working hours of "A" set, should be considered as being irregularly employed and the onus of proof that he is not so irregularly employed, should rest on the mill manager. Schools in mill compounds should be prohibited. If mill children are to be sent to school, Government or Municipal schools for them should be provided and the attendance registers should be open to inspection by the Factory Inspectors. I consider that for a child, who works six hours a day in a factory, the school hours should not exceed two.

I am of opinion that the Government should lay down a standard of ventilation for factories. This should be done by indicating an amount of carbonic acid which must not be exceeded in the atmosphere of any factory. The limit of carbonic acid permissible should be determined after careful experiments carried out by competent officers.

It is, in my opinion, impossible to lay down any standard of humidity for the air of Indian factories. During the monsoon, the amount of moisture in the external atmosphere approaches "saturation" and it would thus be obviously impossible to enforce any standard which limited the humidity permissible in workshops.

In my opinion the standard of latrine accommodation laid down in the Factory Act is quite sufficient. I visited many mills in the early morning when the latrine accommodation might be supposed to be most severely taxed, and in no case did I notice that the accommodation was insufficient or that the workmen were waiting for admission to the latrines.

Separate urinal accommodation should be insisted on. The latrines I saw were in many instances very foul, but this is one of the many defects in the control of factories which can only be got over by more efficient inspection

I think I have now touched on most of the important points from a medical point of view which were disclosed during the stay of the Commission in the Bombay Presidency.

APPENDIX C.

Statement showing the average weights of prisoners and of mill operatives.

Province.	Number of prisoners weighed.	Average weight in lbs.	Number of operatives, other than weavers, weighed.	Average weight in lbs.	Number of weavers weighed.	Average weight in lbs.	Remarks.
.. .. ..	2,656	112·12	735	102·093	288	104·810	
inces	1,746	110·45	100	100·92	52	107	
.. .. ..	6,834	106·187	140	107·939	32	106·25	Average weight of prisone in the United Provinc 115·08lbs.
gal and Assam ..	3,046	110·846	20	108	..	..	
.. .. ..	6,340	120·51	42	117·142	..	..	Average weight of prison in the Rajamundry Cent Jail, Madras, 125·7 lb in Madras general 114·38 lbs.
.. .. ..	7,818	114·38	104	103·634	20	98	
nces of Agra and Oudh	9,680	115·08	177	107·016	200	110·705	
.. .. ..	5,998	120·42	115	113·808	..	..	

—In Bengal probably the most accurate comparison is with prisoners in the United Provinces; in Burma with prisone rally, and more particularly with prisoners in the Rajamundry Central Jail, which is situated in the tract from which t e Madrasi labourers in Burma are recruited.

APPENDIX D.

arative statement of production in certain Calcutta jute mills for working days of varying length.

Month.	Year 1906 (daylight hours) only.				Year 1907 (with electric light).				Percen by w the p duct per h in th shor day (colu exce that i longer (colum
	No. of working days.	No. of hours worked per day.	Total production.	Production per hour.	No. of working days.	No. of hours worked per day.	Total production.	Production per hour.	
			Tons.	*Tons.*			*Tons.*	*Tons.*	
Mill A.									
.. ..	27	11½	1,761	5·67	26	14½	2,044	5·42	4·
.. ..	23	12	1,602	5·89	24	14½	1,863	5·35	10
.. ..	26	12¼	1,844	5·75	26	14½	1,933	5·13	12·
.. ..	25	13	1,737	5·37	26	14½	1,854	4·92	9·
.. ..	27	13¼	1,925	5·35	27	14½	1,788	4·56	17·
.. ..	26	13½	1,963	5·52	25	14½	1,841	5·07	8·
Mill B.									
.. ..	27	11½	1,596	5·14	26	14½	1,769	4·7	9·
.. ..	23	12	1,410	5·17	24	14½	1,556	4·47	15·
.. ..	26	12¼	1,654	5·15	26	14½	1,630	4·32	19·
.. ..	25	13	1,558	4·79	26	14½	1,480	3·92	22·
.. ..	27	13¼	1,699	4·72	27	14½	1,462	3·73	26·
.. ..	26	13½	1,690	4·75	25	14½	1,488	4·10	15
Mill C.									
.. ..	27	11½	1,702	5·48	26	14½	2,084	5·53	17·
.. ..	23	12	1,518	5·58	24	14½	1,841	5·28	5·
.. ..	26	12½	1,851	5·77	26	14½	1,960	5·20	10·
.. .. ..	25	13	1,713	5·27	26	14½	1,901	5·04	4·(
.. ..	27	13¼	1,802	5·00	27	14½	1,864	4·76	5·(
.. ..	26	13½	1,900	5·35	25	14½	1,856	5·12	4·4

—In January–March the labour supply was slightly better in 1906 than in 1907; otherwise the conditions were similar. 1907 the production was below the normal, because of a shorter labour supply, and the making of lighter fabrics than

APPENDIX E.

DRAFT BILL.

WHEREAS it is expedient to amend the law regulating labour in factories; it is hereby enacted as follows:—

Preamble.

PRELIMINARY.

1. (1) This Act may be called the Indian Factories Act, 190 .

Short title, commencement, repeals and extent.

(2) It shall come into force on ; and from that date Act No. XV of 1881 and Act XI of 1891 shall be repealed.

(3) It applies to the whole of British India.

2. In this Act, unless there is something repugnant in the subject or context,—

Interpretation-clause.

(1) "factory" means any premises (other than indigo-factories or premises situated on, and used solely for the purposes of, a tea or coffee plantation) wherein is carried on any process for, or incidental to, making, altering, repairing, ornamenting, finishing or otherwise adapting for use, transport, or sale any article or part of an article; and—

"Factory."

(*a*) wherein steam, water, or other mechanical power is used in aid of any such process; and

(*b*) wherein, subject to the provisions of section 38, not less than fifty persons are on any day simultaneously employed in any manual labour in, or incidental to, any such process; and

every part of a factory shall be deemed to be a factory, except any part used exclusively as a dwelling:

(2) "child" means a person who is under the age of fourteen years, and who has not, being of the age of thirteen years, both passed such educational test as the Local Government may from time to time notify under this sub-section and been declared by the certifying surgeon to be fit to work daily for the time allowed by law for a young person:

"Child"

(3) "young person" means a person who has ceased to be a child and is under the age of seventeen years:

"Young person"

(4) "woman" means a woman of the age of seventeen years and upwards.

"Woman."

(5) "mill-gearing" includes every shaft, whether upright, oblique, or horizontal, and every wheel, drum, pulley, rope, driving strap or band, by which the motion of the first moving power is communicated to any machine:

"Mill-gearing."

(6) a person who works in a factory, whether for wages or not, in a manufacturing process or handicraft, or in cleaning any part of the factory used for any manufacturing process or handicraft, or in cleaning or oiling any part of the machinery, or in any other kind of work whatsoever incidental to, or connected with, the manufacturing process or handicraft, or connected with the article made or otherwise the subject of the manufacturing process or handicraft therein, shall be deemed to be employed therein within the meaning of this Act:

"Employed."

(7) a person shall not be deemed to be actually employed, within the meaning of sections 9, 10, and 11, during any stoppage of work allowed under section 7 or any other interval of not less than half an hour's duration duly notified under section 14:

"Actually employed."

(8) a factory shall be deemed to run continuously unless the running is interrupted by an interval of at least half an hour.

"Continuous running."

INSPECTORS AND CERTIFYING SURGEONS.

3. (1) The Governor-General in Council may, by notification in the *Gazette of India*, appoint a chief inspector of factories in India and may regulate the manner in which he is to perform his duties under this Act.

Inspectors.

(2) The Local Government may in its discretion, by notification in the official Gazette, appoint, by name or by office, such persons as it thinks fit to be inspectors of factories within such local limits as it may assign to such inspectors.

The District Magistrate shall, in virtue of his office, be an inspector of all factories, if any, in his district.

(3) Such chief inspector and inspectors shall be deemed public servants, within the meaning of the Indian Penal Code, and shall be officially subordinate to such authority as the Governments appointing them may from time to time indicate in this behalf.

4. The chief inspector of factories, and an inspector of factories within the local limits for which he is appointed, may—

Powers of Inspector.

(*a*) enter, with such assistants (if any) as he thinks fit, any factory whenever he has reason to believe that any person is employed therein;

(*b*) make such examination of the premises and machinery, and of the registers hereinafter prescribed, and take on the spot or otherwise such evidence of any persons as such inspector may deem necessary for carrying out the purposes of this Act;

(c) exercise such other powers as may be necessary for carrying this Act into effect.

Certifying surgeons.

5. The Local Government may appoint, by name or by office, such persons practising medicine or surgery as it thinks fit to be certifying surgeons for the purposes of this Act within such local limits as it may assign to each, and may make rules for the performance of their duties.

Grant of certificates.

6. (1) A certifying surgeon shall, at the request of any person under the age of seventeen years desirous of being employed in a factory situated within the local limits to which he is appointed, or of the parent or guardian of such person, or of the occupier of the factory in which such person desires to be employed, and on payment of such fee, if any, as may from time to time be prescribed by the Governor-General in Council, examine such person and grant him a certificate specifying his age as nearly as it can be ascertained and, if such person is under fourteen years of age, stating whether he is fit for employment in a factory. Such certificate shall be made over to the person examined, and shall be his property.

th(2) The certificate shall be in such form as toe Governor-General in Council may from time time prescribe.

(3) A certifying surgeon may empower any qualified medical practitioner to grant, on personal examination, provisional certificates to persons desirous of being employed in any specified factory or factories, and may revoke such authority. A provisional certificate shall be subject to confirmation, on personal examination of the person named therein, by the certifying surgeon, and shall be valid only until the date of the first visit of the certifying surgeon to the factory concerned, after the date on which it was issued.

Employment of Operatives.

Limited stoppage of work daily in certain circumstances.

7. (1) In every factory, except a factory in which a system of employment in shifts approved by the local inspector is in force, there shall be, after the factory has run continuously for not more than six hours, an entire stoppage of all work for not less than half an hour :

Provided that nothing in this section shall apply to—

(a) flour mills, rice mills, or ice factories, or

(b) continuous processes in a tannery, sugar refinery, brewery, distillery, mineral-oil refinery, cement works, chemical works, and kilns connected with potteries, or

(c) work in any factory in the boiler-house or engine-room, or as a mechanic, or on the processes of hand-packing and hand-baling, or

(d) any factory of a class to which the Governor-General in Council has, by notification in the *Gazette of India*, declared this section not to apply.

(2) No system of shifts in which the hours of the beginning and ending of the actual employment of each operative in each shift have not been fixed by the occupier of the factory shall be recognised for the purposes of this section.

Holidays.

8. (1) No person shall be employed in any factory on a Sunday :

(2) Provided as follows :—

(a) any manager, foreman, mechanic, artisan, or labourer may be employed in a factory on a Sunday in examining or repairing, or in supervising or aiding in the examination or repair of, any machinery or other thing whatsoever necessary for the carrying on of the work performed in the factory ;

Explanation.—Periodical cleaning is not included in the terms "examining or repairing" ;

(b) any person may be employed on a Sunday in an ice-factory, and on continuous processes in a tannery, sugar-refinery, brewery, distillery, mineral-oil refinery, cement works, chemical works, glass work, and in kilns connected with potteries ;

(c) any person may be employed in a factory on a Sunday if he has had or will have a holiday for a whole day on one of the three days immediately preceding or succeeding the Sunday, and if the occupier of the factory has, previous to the Sunday or to the substituted day, whichever is earlier, served on the local inspector notice of his intention so to employ the said person ;

(d) the Local Government may from time to time, by notification in the official Gazette, declare sub-section (1) of this section not to apply to any factory or class of factories (the factory or class being described in the notification) in which the work performed—

(i) necessitates continuous production for technical reasons ; or

(ii) supplies the public with articles of prime necessity which must be made every day ; or

(iii) by the exigencies of the trade or by its nature cannot be carried on except at stated seasons or at times dependent on the irregular action of natural forces ; and

(e) the Governor General in Council may from time to time, by notification in the *Gazette of India*, declare sub-section (1) of this section not to apply to factories of any class described in the notification.

Employment of children.

9. (1) No child shall be employed in any factory unless he has obtained a certificate under section 6 of this Act to the effect that he is of a specified age not less than nine years, and is fit for employment in a factory.

(2) No child shall be employed in any factory before half-past five o'clock in the morning or after seven o'clock in the evening.

(3) No child shall be actually employed in any factory for more than six hours in any one day.

(4) The period of employment of a child shall not in any one day be spread over more than eight and a half consecutive hours.

Employment of young persons.

10. (1) No young person shall be employed in any factory unless he has obtained a certificate under section 6 of this Act showing that he is not less than fourteen years of age;

Provided that if a young person can, by the production of a certificate obtained by him as a child under section 6 of this Act, show that he has since attained the age of fourteen years, no further certificate shall be required under this section.

(2) No young person shall be employed in any factory, except a factory for ginning cotton, before half-past five o'clock in the morning and after seven o'clock in the evening:

Provided that, if the exigencies of trade so demand, the Governor General in Council may from time to time, by notification in the *Gazette of India*, declare this sub-section not to apply to young persons employed in factories of any class described in the notification.

(3) No young person shall be actually employed in any factory for more than twelve hours in any one day.

Employment of women.

11. (1) No woman shall be employed in any factory, except a factory for ginning cotton, before half-past five o'clock in the morning or after seven o'clock in the evening.

(2) No woman shall be actually employed in any factory for more than twelve hours in any one day.

Prohibition of employment of woman, young person, or child in two factories on same day

12. No occupier of a factory shall employ therein on any day any woman, young person, or child who has to his knowledge already been employed on the same day in any other factory.

Registers of young persons and children.

13. In every factory there shall be kept, in such form and manner and with such particulars as the Governor General in Council may from time to time prescribe, a register of the young persons and children (if any) employed in such factory, and of their respective employment.

Notice fixing hours of employment, etc.

14. (1) There shall be affixed in some conspicuous place near the main entrance of every factory a notice, in English and the language of the majority of the operatives in such factory, setting forth the following particulars—

(*a*) the hours of stoppage of work under section 7,

(*b*) the hours of beginning and ending work for each shift (if any) approved under section 6,

(*c*) the hours of employment of women and young persons (if any),

(*d*) the hours of employment of children (if any) according to the different sets, and

(*e*) the compulsory holidays on which the factory will be closed during the current month.

A copy of the notice shall be sent so as to reach the local inspector not later than the first day of the month to which it relates.

Special provision as to employment of young persons in factories working not more than 12 hours a day.

15. (1) The provisions of sub-section (1) of section 10 and section 13 as to the certification and registration of young persons shall not apply to any young person employed in a factory which is conducted on the system of working not more than twelve hours a day, exclusive of any stoppage under section 7, and the occupier of which has previously served on the inspector notice of his intention to conduct the factory on such system from a specified date.

(2) When the occupier of a factory has served on the inspector notice of his intention as aforesaid, the factory shall be deemed to be worked on that system from the date specified in the notice until the occupier changes it, and, subject to the exception made in sub-section (4), any person actually employed during such period in that factory for more than twelve hours on any one day shall be deemed to be employed contrary to the provisions of the Act.

(3) When the above system has been introduced in a factory, no change shall be made within three months of its introduction, and until the occupier has served on the inspector notice of his intention to change the system from a specified date.

(4) In a factory conducted on the above system, the restriction of the period of actual employment to twelve hours a day shall not apply to any person not less than seventeen years of age who is employed in the said factory in the boiler house or engine room, or as a mechanic, or on the processes of calendering, sewing, bundling, packing, or baling.

Saving for young persons employed in repairs.

16. Nothing in section 10 shall apply to any young person being a mechanic, artizan, or labourer, working only in repairing either the machinery in or any part of a factory.

Health and Safety.

Sanitary provisions.

17. The following provisions shall apply to every factory:—

(*a*) it shall be kept in a cleanly state;

(*b*) it shall be kept free from effluvia arising from any drain, privy, or other nuisance;

(*c*) it shall not be so overcrowded while work is carried on therein as to be dangerous or injurious to the health of the persons employed therein;

(*d*) it shall be ventilated in such a manner as to render harmless, as far as practicable, any gases, vapours, dust, or other impurities generated in the course of the work carried on therein that may be injurious to health.

Provision as to ventilation by fans in certain factories.

18. (1) If in a factory in which any process is carried on by which dust or other impurity is generated and inhaled by the workers to an injurious extent it appears to the local inspector that such inhalation could be to a great extent prevented by the use of a fan or other mechanical means, the local inspector may direct that a fan, or other mechanical means of a proper construction for preventing such inhalation be provided, maintained, and used within a reasonable time.

(2) Any order under sub-section (1) may be set aside, on appeal or otherwise, by the Local Government or such authority as it may appoint in this behalf.

Ventilation in cotton factories

19. In every factory in which the spinning or weaving of cotton is carried on the arrangements for ventilation shall be such that during working hours in no part of the factory shall the proportion of carbonic acid (carbon dioxide) exceed such amount as may be prescribed by the Governor General in Council by notification under this section.

Purity of water used for humidifying.

20. In any factory in which humidity of the atmosphere is produced by artificial means the water used for the purpose of producing humidity shall be taken either from a public supply of drinking water or from other source of water ordinarily used for drinking, or shall be effectively purified to the satisfaction of the inspector before being used for the purpose of producing humidity.

Provision of latrines

21. Every factory shall be provided with suitable latrine accommodation for its operatives according to such scale as may be prescribed by the Local Government by notification under this section.

Water supply

22. In every factory there shall be maintained a sufficient water-supply for the use of the persons employed in the factory.

Doors of factory to open outwards

23. In every factory, the construction of which was not commenced before the date on which this Act came into force, the doors of each room in which more than thirty persons are employed, shall, except in the case of sliding doors, be constructed so as to open outwards.

Provision of means of escape in case of fire.

24. (1) Every factory shall be provided with such means of escape in case of fire for the persons employed therein as can reasonably be required in the circumstances of each case.

(2) In the case of any factory which is not so provided the local inspector may serve on the occupier of the factory a notice in writing specifying the measures necessary for providing such means of escape, and requiring him to carry them out before a specified date.

(3) Any order under sub-section (2) may be set aside, on appeal or otherwise, by the Local Government or such authority as it may appoint in this behalf.

Fencing.

25. (1) (*a*) Every fly-wheel directly connected with a steam-engine, water-wheel or other mechanical power in any part of a factory, every part of a steam-engine or water-wheel, and every other part of the machinery or mill-gearing of a factory which may, in the opinion of the local inspector, be dangerous if left unfenced, shall, while the same is in motion, and

(*b*) every hoist or teagle, and every hoist-well, trap-door or other similar opening near which any person is liable to pass or be employed, shall at all times, be kept by the occupier of such factory securely fenced to the satisfaction of and in accordance with any orders given by the local inspector.

(2) Any order under sub-section (1) may be set aside, on appeal or otherwise, by the Local Government or such authority as it may appoint in this behalf.

Prohibition of employment of women, &c., in certain dangerous work.

26. No woman, female young person, or child shall be allowed to clean any part of the mill-gearing or machinery of a factory while the same is in motion, or to work between the fixed and traversing parts of any self-acting machine while such machine is in motion by the action of the steam engine, water-wheel, or other mechanical power, as the case may be.

Prohibition of employment of women, &c., in front of cotton-openers in press factories.

27. No woman, female young person, or child shall be employed in the part of a factory for pressing cotton in which a cotton-opener is used, provided that if the feed-end of the cotton-opener is in a room entirely separated from the delivery-end by a partition extending from the floor to the roof, then women, female young persons, and children may be employed in the room in which the feed-end of the opener is situated.

Notice to be given of accident.

28. When any accident occurs in a factory causing death, or bodily injury, whereby the person injured is prevented from returning to his work in the factory during the forty-eight hours next after the occurrence of the accident, notice of such accident should be sent to such authorities in such form and within such time as the Local Government may from time to time by rule direct.

Penalties.

Penalties.

29. (1) If in any factory—

(*a*) any person is employed or allowed to work contrary to any of the provisions of this Act;

(*b*) a register is not kept in the manner prescribed under section 13;

(*c*) a notice is not set up and maintained, and a copy thereof sent to the local inspector, as required by section 14;

(*d*) any of the provisions of sections 17 and 19 for cleanliness, ventilation; and overcrowding are not complied with;

(*e*) any order of an inspector under sections 18 and 24 is not complied with;

(*f*) water is used for the purpose of producing humidity in contravention of the provisions of section 20;

(*g*) a sufficient supply of water for the persons employed is not maintained;

(*h*) latrine accommodation is not provided in accordance with the provisions of section 21;

(*i*) any machinery, mill-gearing, hoist, teagle, or opening is not kept fenced as required by section 25;

(*j*) any door is constructed and maintained in contravention of section 23;

(*k*) any notice or return required by this Act, or by rules under it, to be furnished is not furnished;

(*l*) any other act prohibited or prescribed by this Act or any order or rule made thereunder is done or is omitted to be done;

the occupier of the factory shall be liable to fine which may extend to two hundred rupees.

Provided that—

(*i*) no prosecution under this sub-section shall be instituted except by, or with the previous sanction of, the local inspector; and

(*ii*) no person shall be liable under this sub-section to more than one penalty for any one description of offence committed on the same day, except where two or more persons are employed contrary to the provisions of this Act, in which case one penalty may be imposed in respect of each person so employed.

(2) Any person who corruptly uses or attempts to use, as a certificate granted to himself under section 6, a certificate granted to another person under that section, or who, having procured a certificate under the said section, corruptly allows it to be used, or an attempt to use it to be made, by another person, shall be punished with fine which may extend to twenty rupees.

Obstruction to inspectors.

30. If any person wilfully delays an inspector in the exercise of any power under section 4, or fails to produce, on demand by an inspector, any registers or other documents kept in pursuance of this Act, or conceals or prevents, or attempts to prevent, any person employed in a factory from appearing before or being examined by an inspector, he shall be liable to fine not exceeding two hundred rupees:

Provided that no one shall be required to answer any question or to give any evidence to criminate himself.

Exemption of occupier from fine on conviction of the actual offender.

31. (1) When the occupier of a factory is charged with an offence against this Act, he shall be entitled, upon information duly laid by him, to have any other person whom he charges as the actual offender brought before the Court at the time appointed for hearing the charge; and if, after the commission of the offence has been proved, the occupier of the factory proves to the satisfaction of the Court—

(*a*) that he has used due diligence to enforce the execution of this Act, and

(*b*) that the said other person had committed the offence in question without his knowledge, consent, or connivance,

that other person shall be convicted of the offence, and the occupier shall be discharged from any liability under this Act.

(2) When it is made to appear to the satisfaction of an inspector at the time of discovering an offence—

(*a*) that the occupier of the factory has used all due diligence to enforce the execution of this Act, and

(*b*) by what person the offence has been committed, and

(*c*) that it has been committed without the knowledge, consent, or connivance of the occupier and in contravention of his orders,

the inspector shall proceed against the person whom he believes to be the actual offender without first proceeding against the occupier of the factory.

Presumption as to employment.

32. If a person over the age of six years is found inside any room or other part of a factory in which any manufacturing process or work incidental to any manufacturing process is being carried on, he shall, until the contrary is proved, be deemed to have been then actually employed in that factory.

Evidence as to age.

33. When an act or omission would, if a person were under or over a certain age, be an offence punishable under this Act the statement on oath of a certifying surgeon that he has personally examined the said person and believes him to be under or over a stated age shall, in the absence of a birth-certificate or of a certificate granted under section 6, be conclusive evidence of the age of that person.

Person beginning to occupy factory to give notice.

34. (1) Every person shall, within one month after he begins to occupy a factory, send to the local inspector a written notice containing the name of the factory and of the place where it is situate, the address to which he desires his letters to be addressed, the nature of the work performed in such factory, the nature and amount of the moving power therein, and the name of the person under whom the business of the factory is to be carried on.

(2) If the person under whom the business of the factory is carried on be changed, the occupier for the time being shall send to the local inspector, within seven days from the date on which the change was made, a written notice stating the name of the person under whom the business of the factory will in future be carried on

(3) During the absence of the occupier of the factory from British India, the person under whom the business of the factory is carried on shall be deemed to be the occupier of the factory for all the purposes of the Act.

MISCELLANEOUS.

Computation of time.

35. The hours of day prescribed in sub-section (2) of sections 9 and 10 and sub-section (1) of section 11 shall be deemed to be hours of local mean time:

Provided that for the purpose of factories situated at places where local mean time is not the Government standard of time, the Local Government shall declare by notification that certain specified hours of Indian standard time shall be substituted, in each such place or district, for the hours of local mean time prescribed in these sections, and thereafter these sections shall, for the purpose of all factories situated at such places, be read as if the substituted hours of Indian standard time were prescribed therein.

Power to make rules.

36. (1) Subject to the control of the Governor General in Council, the Local Government may from time to time make rules consistent with this Act to provide for

(*a*) the fencing of machinery, mill-gearing, hoists and teagles, and hoist-wells, trap-doors and other similar openings, in factories;

(*b*) the water-supply to be maintained for the use of persons employed in factories;

(*c*) the ventilation of factories and their cleanliness (including lime-washing, painting, varnishing, and washing) and freedom from effluvia arising from any drain, privy, or other nuisance;

(*d*) the prevention of such overcrowding of factories, while work is carried on therein, as is likely to be injurious to the health of the persons employed therein;

(*e*) the inspection of factories;

(*f*) the manner in which appeals under this Act are to be presented and heard; and

(*g*) otherwise carrying out the purposes of this Act.

(2) The Governor General in Council may from time to time make rules requiring occupiers of factories to furnish such returns, occasional or periodical, as may be necessary for the effectual carrying out of this Act.

(3) Such rules shall be published in the local official Gazette or the *Gazette of India*, as the case may be, and shall thereupon have the force of law.

(4) Before making rules under clause (*b*), clause (*c*), or clause (*d*) of sub-section (1) of this section, the Local Government, and before making rules under sub-section (2) of this section, the Governor General in Council, shall publish, in such manner as may in its or his opinion be sufficient for giving information to persons interested, a draft of the proposed rules, with a notice specifying a date (not less remote than two months from the publication of the notice) on or after which the draft will be taken into consideration, and shall consider any objection or suggestion which may be received from any person with respect to the draft before the date so specified.

Crown factories.

37. This Act shall apply to factories belonging to the Crown:

Provided that, in case of any public emergency, the Governor General in Council or the Local Government may, by an order in writing, exempt any factory from this Act to such extent and during such period as the Governor General in Council or the Local Government, as the case may be, thinks fit.

Power to Local Government to extend definition of "factory."

38. Notwithstanding anything in clause (*b*) of the definition of the word "factory" in section 2 the Local Government may, from time to time, by notification in the official gazette, declare any premises, or premises of any class, which fufil the other conditions of the said definition, to be a factory for all the purposes of this Act, or for such of those purposes as may be specified in the notification, if the number of persons simultaneously employed in the premises on any day in any manual labour in, or incidental to, any such process as is referred to in the said clause (*b*) is less than fifty and not less than twenty.

(2) The Local Government may, by such notification, fix any number below fifty and not below twenty as the number of persons whose simultaneous employment as aforesaid is to be held to subject premises, as a factory, to all or any of the provisions of this Act and of the orders and rules made thereunder.

Notes on sections.

Section 2.—For definition of "factory" see paragraph 79 of report, "child" paragraph 91, "actually employed" section 10 (2) of the present Act. A definition of "continuous running" is necessary for the purpose of section 7 of the draft.

Section 3.—For the appointment of a Chief Inspector see paragraph 113 of report.

Section 4, *clause* (*c*).—This is taken from the English Act and seems necessary to protect an inspector in the execution of his duty. Clause (*c*) of the present section has been omitted because we propose to make the employment of any child or young person without a certificate an offence.

Section 6.—See section XVI of report. We think it important that the form of certificate should be the same throughout India and have therefore made the Governor-General in Council the prescribing authority. The form should, we think, be as follows :—

CERTIFICATE OF AGE UNDER INDIAN FACTORIES ACT.

No. of certificate———— *Date of certificate*————

Place————

Name.	Father's name.	Caste.	Residence.	Two personal marks of identification.	Approximate age on date of certificate. (*Years in words.*)	Whether physically fit or not, if under 14 years.

Provisional certifier (*if any*). *Certifying Surgeon.*

We think it important to have the form as simple and brief as possible : it should be in duplicate, one copy being given to the child or young person and the other to the factory in which he is employed. Thumb impressions are, in our opinion, unnecessary, as they can seldom be read by factory inspectors or managers; but the marks of identification should be carefully entered. Certificate forms should be printed by Government on very durable paper, and issued in books to certifying surgeons, or for sale to factory owners. No other forms should be used. It is important that the paper should be strong and durable, as a child's certificate has to last for several years.

Section 7.—For sub-section (1) see paragraph 86 of report. The exemptions we propose are in favour of factories, or parts of factories in which work cannot be stopped during the intervals of rest, *e.g.*, the fires must be kept up in the boiler house and the engines must be oiled during the interval. In factories which dispose of their goods by retail, orders which arrive in the forenoon must be despatched by the afternoon, thus necessitating hand-packing during the interval. For sub-section (2) see paragraph 72 of report.

Section 8.—See paragraph 87 and 88 of report. The words "by the exigencies of the trade" have been added in clause (*d*) (*iii*) of sub-section 2 so as to include ginning factories (see the last sentence of paragraph 81 of the report). There is nothing in the nature of the work of ginning to prevent it being carried on at any time of year, but the trade requires that it shall be carried on as soon as the cotton is picked.

Section 9.—See paragraphs 63, 66, and 71 of report.

Section 10.—See paragraphs 58, 61, 66, 67, and 68 of report.

Section 11.—See paragraphs 64, 66, and 67 of report.

Sections 12 *and* 13.—These are practically sections 11 and 9 of the present Act. The forms of registers under section 13 will have to be very carefully drawn up after consulting all Local Governments, and we think that the same forms should be prescribed for factories all over India.

Section 14.—This is based on section 10 of the present Act: it seems advisable that the notice should be in the language of the majority of the operatives, *e g*, most of the operatives in factories in Burma are Madrasis who do not understand Burmese, and in jute mills at Calcutta the hands are mostly from the United Provinces. The obligation to notify information under each of clauses (*a*) to (*e*) will help towards the enforcement of the law, and the notice will be of great use to inspectors.

Section 15.—See paragraph 60 of report: the section is drafted on the lines of section 29 of the English Act.

Section 16.—This is section 158 of the English Act: it is necessary in order to provide facilities for gangs of mechanics, which often include apprentices and young boys, employed on special repairs in factories.

Sections 17, 21, *and* 22.—In the present Act there are no *substantive* provisions dealing with ventilation, over-crowding, etc., and doubt has been expressed whether rules made under section 18, sub-section (1), clauses (*b*), (*c*), and (*d*), would be held by the courts to be "consistent with the Act." To remove any doubt on this point, we have drafted sections 17, 21, and 22, while section 36, sub-section (1) (*b*), (*c*), and (*d*), provides for the making of rules dealing with these matters. Section 17 is based on section 1 of the English Act.

Section 18.—See paragraph 97 of report and section 74 of the English Act.

Section 19.—See paragraph 94 of report and section 94 (3) of the English Act.

Section 20.—See paragraph 96 of report and section 94 (1) of the English Act.

Section 21.—The scale of latrine accommodation which we propose for adoption all over India is given in paragraph 98 of our report. We think it better, however, to let the notification be issued by the Local Governments in case there may be need for a modification of the scale in special localities.

Section 23.—See paragraph 101 of report and section 16 (2) of the English Act.

Section 24.—See paragraph 100 of report and section 14 of the English Act.

Section 25.—The section dealing with fencing is in the amended form approved by the Government of India on 25th May 1905.

Section 26.—This is section 8 of the present Act, but we propose to extend the prohibition to women and female young persons because we consider they are exposed to considerable danger in employment of this kind on account of the clothes they wear; they are protected under the English Act, [sections 12 (3) and 13 (3)].

Section 27.—See paragraphs 102, 103, and 104 of report.

Section 29.—This section has been re-drafted in order to make the occupier of a factory responsible, in the first instance, for all breaches of the Act committed in his factory. This liability is actually imposed by section 17 of the present Act, but there has been difficulty in some cases in the past in bringing home the responsibility, and we think it will be a much better arrangement to declare the occupier liable in every case, giving him at the same time an opportunity of discharging his liability by producing the actual offender. Advantage has in the past actually been taken of the wording of the present section ('any person who employs, etc.') to put forward low-paid subordinates to bear the brunt of prosecutions: one witness stated to us that one of the duties of the mill jobber in Bombay was to stand prosecutions.

Section 30.—As inspection will, we hope, be much stricter in future, we consider it necessary to guard against the wilful obstruction of an inspector in the execution of his duties: the inspectors in Bombay also have informed us that they consider a provision of this nature necessary. The section is based on section 119 (3) of the English Act.

Section 31.—The remarks on section 29 explain the necessity for this provision. The draft merely reproduces section 141 of the English Act.

Section 32.—See paragraphs 92 and 93 of the report.

Section 33.—We have altered section 16 of the present Act considerably. Under our proposals for the certification of children and young persons, the possession or non-possession of a certificate will, in most cases, be the only point to be inquired into. But there will still be some cases in which the question of age will arise; and we think that the statement on oath

of the certifying surgeon should exclude all other oral evidence on this point. Past experience has shown that there is no generally accepted test or standard for age, and in any prosecution the evidence of respectable medical men can always be got to contradict the opinion of the certifying surgeon. We consider that the certifying surgeons are, by experience, probably better qualified to give an opinion on age than other medical men, and also that in order to secure a proper enforcement of the Act, it is necessary that their opinion as to age should be accepted by the courts. It hardly seems necessary in these circumstances to retain in the section the provision as to the burden of proof.

Section 34.—We think that the occupier of a factory should, so long as he remains in British India, always be primarily responsible for breaches of the Act in his factory. The words "during the absence of such occupier from the factory," in the amending Bill approved by the Government of India on 25th May 1905 are too vague. Only in the case of the occupier's absence from British India would we permit the responsibility to devolve on the manager; and we have drafted this section accordingly.

Section 35.—See paragraph 69 of report.

Section 36, 37, *and* 38.—These are sections 18, 19, and 20 of the present Act.

APPENDIX F.—Inspection notes.

Notes on Factories visited by the Commission.

AHMEDABAD.

Serial no. of factory.	Notes.
1	*Cotton spinning.*—Employs 1,102 workers, including 101 women and 165 half-timers. The latter work in three relays— (*a*) From 6-30 A.M. to 2 P.M. with rest intervals from 9-30 A.M. to 10 A.M. and 12-30 to 1 P.M. (*b*) 10 A.M. to 6-15 P.M. with rest intervals from 12-30 P.M. to 1 P.M. and 4 P.M. to 4-30 P.M. (*c*) 8 A.M. to 5-30 P.M. with rest intervals from 11 A.M. to 1 P.M. The women work from 8 A.M. to 5-30 P.M. with an interval from 11-30 A.M. to 1 P.M. Besides these fixed intervals, workers leave their work to go to the latrine, eat food, smoke, etc. For this purpose the manager issues 95 passes for distribution among the 836 adult males; no adult male may leave his work without a pass; these 95 passes are found sufficient for 836, and are not exceeded. No passes are required for women and half-timers, who go out as they like. The mill tried working long hours by electric light for 3 months in 1905, but abandoned the experiment as unprofitable; there was a great increase of waste, and the workers who lived at a distance threatened to leave. Examined 55 half-timers; all wore certificates in tin cases, and could be checked at once; the system seems to work well here. Weighed 20 adult males, average weight 110½ lbs. A few immature adults were noticed, all above 14, however, but fit for light work only. Ventilation and fire exits satisfactory. Latrines—39 seats and also separate urinals; they were clean, and there was no waiting outside the latrines. Wages paid fortnightly, keeping nine days' wages in hand.
2	*Cotton spinning and weaving.*—2,315 employés, including 175 females and 113 half-timers. Saw 51 out of 54 half-timers in A set; all had certificates, but 3 or 4 seemed under 9. Saw no immature adults. 48 seats in the latrine; it was very dirty and was supposed to be cleaned by the municipality. Water supply good. Weighed 26 adults, average weight 103 lbs. Ventilation in carding room bad, no windows open. Fire exits as usual, the doors opening inwards Steps are being taken to put in fans. In this connection it is noted that the present standard of 10 sq. ft. air inlet *per* person is impossible and ridiculous. Got electric light in blow room, but not over whole factory, and never work all night Hours in mill 5-45 A.M. to 7-30 P.M. with half-hour interval; in the cold weather the hours are from 6-45 to 6-15. Half-timers A set 6-20 to 8-30 and 1 P.M. to 4-45. B set 8-30 to 12-30 and 4-45 to 6-30. This is found to be the best arrangement. Two hundred passes are issued for all the operatives, including women and children.
3	*Cotton spinning and weaving.*—Number of workers—649 men, 48 women, and 85 half-timers; total 782. Examined 45 half-timers and found one physically unfit, 5 apparently under nine years, and the others satisfactory. All were duly certified. Latrines 16, very dirty; they are supposed to be cleaned by the municipality. Water supply insufficient. Fire exits practically useless, stairs being in a dangerous condition, and exits badly placed. One staircase dangerously placed in rope alley way, and steps too high, so as to be dangerous in case of crowding. Ventilation very bad, and no fresh air admitted, all windows being closed, atmosphere very foul. Steam jets and humidifiers both in use. Weighed 18 men, average 103 lbs. (weavers 109 and others 99 lbs.). Mill frequently works by electric light. The following are the hours actually worked for 12 months ending in September 1907:—

Month and year.	No. of days worked.	No. of hours worked.	Average no. of hours per day excluding midday interval.	Longest day.	No. of holidays.	
					Sundays.	Other days.
		Hrs. Mts.	Hrs. Mts	Hrs. Mts.		
October 1906	27	345 15	12 47	14 50	2	2
November „	26	354 10	13 37	14 50	2	2
January 1907	27	352 45	13 17	13 25	1	3
February „	23	296 0	12 20	13 45	3	2

AHMEDABAD—*continued.*

Serial no. of factory.	Notes.									
3 *contd.*	Month and year.		No. of days worked.	No. of hours worked	Average no. of hours *per* day excluding midday interval.	Longest day.	No. OF HOLIDAYS.	
							Sundays.	Other days.
				Hrs. Mts.	Hrs. Mts.	Hrs. Mts.		
	March	1907	26	317 30	12 12	12 40	5	0
	April	„	26	324 30	12 1	13 0	3	1
	May	„	26	347 57	13 22	13 35	3	2
	June	„	25	354 15	14 10	14 50	5	...
	July	„	27	398 10	14 18	15 15	2	2
	August	„	26	354 55	13 39	14 50	...	5
	September	„	26	362 50	13 57	14 20	2	2
		TOTAL	285	3,808 17	13 22	155 20	28	21

The longest working day was the 9th July, when the mill worked from 5-45 A.M. to 9 P.M. with ½ hour's interval at noon. A number of operatives were assembled and questioned: they were unanimously in favour of legislation to restrict hours, and said that they worked long hours of their own accord because if they refused others would be brought in to take their places, and besides they liked the extra pay: but they were exhausted by the long hours and their sight suffered from working by electric light; they all would welcome restriction of hours—the sunrise to sunset arrangement seemed more acceptable than a fixed number of hours all the year round; they got no time for rest at home; they all take their morning meal not at noon but between 9 and 10 A.M. and if anything was over, they eat it in the afternoon between 2 and 4: their principal meal was taken at night after leaving the mill. Noticed several operatives sitting about outside without passes; the 10 *per cent.* system of passes is evidently not very strictly enforced here. Several of the machines in the mill were much too close together for the safety of the operatives.

Cotton spinning.—The half-timers at work were examined; there were 18 children, all were over 9. As the mill was working on a general holiday, the number of half-timers was much smaller than usual. The children were much better developed than those examined in Bombay. Four immature adults were picked out for examination; all were over 14, and were considered fit for a full day's work. The average daily attendance at the mill is: 204 men, 63 women, 73 half-timers. The present hours of work are from 6-35 A.M. to 6-15 P.M., with the half hour's interval from 12-30 to 1 o'clock. The women work from 7 A.M. to 7-30 P.M. with an interval from 11-30 to 1 P.M. Children are employed in two sets—

(*a*) from 6-30 to 12-30. Interval from 9 to 9-30.
(*b*) from 1 to 6-15. Interval from 4 to 4-30.

The mill is fitted with electric light. Ventilation generally good; the reeling room is underground, and is rather dark. The fire exits were defective; in the ground floor, there were three exits opening inwards, two being wooden doors, the third an iron sliding door, opening into the rope alley. On the first floor there were no special arrangements. The latrine accommodation is according to the Act; but the latrines were very filthy, and were situated too far from the mill. Consequently, the operatives utilise the mill compound for purposes of nature. The water supply was excellent. Whitewashing satisfactory. Twelve workers were weighed; their average weight was 99 lbs. The mill worked from 6-15 to 9 during nine days in October, and for eight days in September. The operatives, as a whole, appeared healthy. Adult's pay Rs. 10-8 a month, with one anna a day extra for overtime, of whatever duration, after sunset. Half-timers get Rs. 3-8 a month, with 8 annas a month for overtime. The women receive Rs. 9-8 a month, with half an anna a day overtime. The pass system is adopted, but is not rigidly adhered to; 10 *per cent.* of passes are given.

Cotton spinning.—Thirty-three half-timers were examined, of these two seemed under nine years of age; but they had been certified by the surgeon. No full-timers were seen who appeared to be under fourteen years of age. Whitewashing satisfactory. Latrine accommodation up to the standard prescribed by the Act; but all the latrines were very dirty, and they were situated much too far from the mill. Ten operatives weighed, the average was 107 lbs. each. Ventilation good. Cold water spray humidifiers were fitted, but only a few were in use at the time of the Commission's visit. The fire exit arrangements were defective; the doors opened inwards, and on the first floor the number

Serial no. of factory.	Notes.
5 *contd.*	of exits was insufficient. Further, practically all the windows were battened over with baling hoops, in a lattice-work arrangement, to a height of about six feet. The fencing of the machinery was very good, the plant being almost entirely modern. An exceptionally large number of workers were loitering in the mill compound. The pass system is adopted, 10 *per cent.* of passes being allowed. All are fully utilised, and the system is not rigidly enforced. The mill is not fitted with electric light. In June it worked from 5-30 A.M. to 7-30 P.M., with half an hour's interval. Children are employed in three sets, as follows:— 1st—6-25 to 12-30. Interval from 9 to 9-30. 2nd—1 to 6-15. Interval from 4 to 4-30. 3rd—9 to 4. Interval from 12 to 1-30.
6	*Match factory.*—Employs 146 men, 29 women, and 41 half-timers. The factory works by day-light; the operatives are employed from 7 A.M. to 6 P.M., with an interval from noon to 1-30; the half-timers are worked from 10 to 5, with the same interval as for the women. There have been no cases of necrosis during the past ten years. The mixing and drying are done in open sheds, and the arrangements are such that there is practically no danger of phosphorus poisoning. The management have found considerable difficulty in obtaining an adequate supply of labour, though they pay higher wages than in cotton mills. The manager urges that there should be a special exemption for his factory, permitting half-timers in the filling room to work longer hours.
7	*Cotton spinning.*—As many children as could be collected were examined; out of 29 7 would have been rejected under a physical fitness test. All the children were certified, and were easily identifiable from their certificates. Thirteen immature adults were examined; of these only 2 had certificates of age. Ten were probably under 14, and would have been rejected had a physical fitness test been prescribed. Latrine had 10 seats; all very dirty; no people waiting. The water supply is from the municipal taps and is excellent. There is no reserve cistern. Twelve adults were weighed; the average weight was 104½ lbs. Ventilation good; fire exit arrangements not satisfactory, the staircases being neither numerous enough nor made of proper material. The mill was started in June 1906 and the machinery is of the most modern type. Day-light hours only are worked. Considerable difficulty is experienced in getting an adequate supply of labour, the jobbers from other mills entice the operatives away if possible. In such cases it is the custom for the successful mill to pay the worker his wages for the full month, although he may have been in the new mill for a few days only. Last year, the mill was stopped on 37 Sundays and 13 other days, being Hindu or Muhammadan holidays.
8	*Cotton spinning and weaving.*—The mill is new, and is only half working at present. Three hundred hands engaged, of whom 20 are half-timers and 50 women. Difficulty in obtaining weavers; but the management are able to secure enough of the other hands required. Examined 10 half-timers; two seemed under nine years, though certified. Fifteen seats in the latrines; the septic tank system is being adopted. Ventilation and water-supply excellent. All the ground floor doors open inwards; there is no electric light installation, and no intention of erecting one.
9	*Cotton spinning and weaving.*—Nine hundred men, 59 women, and 135 half-timers; total 1,094. The mill starts at 6-50 A.M., and closes at 6 P.M.; the half-hour's interval is between 12-30 and 1 P.M. There is no electric light in the mill. The regular working hours are from sunrise to sunset. In June the work begins at 5-45 A.M., and the mill closes at 7-30 P.M., with the usual half-hour's interval. The half-timers are divided into A and B sets. A gang works from the starting time to 9 A.M., and again from 4 P.M. to the closing time. B gang works from 9 A.M. to 4 P.M. with an interval of half an hour during the general interval in the middle of the day. Examined 41 half-timers; 5 appeared under 9, and if certificates of physical fitness had been required, 3 would probably have been rejected. No immature adults were found unfit for a full day's work. The latrines had 22 seats, fairly clean, and no people waiting about. Water supply good. Ventilation good everywhere. Fire exits well arranged, but the exit staircase is ricketty and dangerous. Weighed 20 adults from carding and spinning rooms; average weight 100 lbs. Weighed 15 from the weaving shed, average weight 106½ lbs. One man attends two looms.
10	*Cotton spinning and weaving.*—Number of workers— Adult males . . . . . 444 Females . . . . . 102 Half-timers . . . . . 159 TOTAL 705 Saw 71 half-timers (out of a set of 77); of these 9, who appeared over 9 years of age, were not physically fit for a half-day's work, none over 9 seemed unfit, but one had an infectious eye complaint. All were certified and were easily identified; a few certified as over 14 seemed under 14. Latrines clean, 19 seats, septic tank system, the effluent is used for irrigation. Eleven houses provided for workmen. Ventilation and lighting in the mill excellent; ample provision of fire exits, most doors sliding ones, rest open inwards. Some of the water used for humidifying came from engine condensers.

AHMEDABAD—*continued.*

Serial no of actory.	Notes.
10 *contd.*	and was very impure. Twenty workers weighed 108 lbs. No electric light is used in the mill. Statement of actual working hours is as below :—

	Average hours per working day, excluding rest interval.		Longest day.	
	Hrs	Mts.	Hrs.	Mts.
October 1906	11	28	11	50
November ,,	11	6	11	20
December ,,	10	25	10	53
January 1907	10	1	10	50
February ,,	10	44	11	27
March ,,	11	36	12	10
April ,,	12	24	12	50
May ,,	12	55	13	16
June ,,	12	50	13	20
July ,,	12	53	13	15
August ,,	12	7	12	47
September ,,	11	48	12	22

Total working days in year 314; holidays were given on 34 Sundays and 47 other days, (10 Hindu and Muhammadan festivals). A statement showing the number of days *per* month (excluding holidays) on which 50 operatives (chosen at random) from the spinning and weaving departments worked is given below. The manager explains that owing to scarcity of labour jobbers from one mill often entice away workers from other mills.

Statement of number of days on which 50 operatives worked during the period between November 1906 and October 1907.

Number of days mill worked.	1906.		1907.									
	November.	December.	January.	February	March.	April.	May	June.	July.	August.	September.	October.
	26	26	27	23	27	25	27	25	27	26	26	27
						Spinning Department.						
Serial No. of operative.												
1	24	21	26¾	14	16½	...	...	...	...	...	...	...
2	25¾	25	25½	23	26¼	24½	26½	24½	26½	25	26	23
3	20	23	27	10		...	..	...	...	...	...	...
4	25	25¾	17	21	13½	18½	2	..	..	...	...	..
5	26	26	27	23	27	26	27	25	27	26	26	26
6	7	...	.	.	.	.	.	..	.	...	...	...
7	26	26	27	21½	26½	25	27	17	27	18		...
8	26	23	27	23	27	25	26½	24½	27	25	26	27
9	21½	6	..	..	...	. .	. .	...	...	...	...	..
10	25	25¼	22	13½	25¾	25	26¾	23	27	26	26	27
11	26	23	23	19¼	20	25	23	25	20¾	...	...	...
12	18¼	25	27	21	26	12½	...	...	...	...	...	...
13	26	26	9		...	. .	...	...	...	...	...	...
14	19½	25	25½	22	23½	14	...	...	...	...	...	...
15	18	17½	19	21	24	2½	...	...	...	...	...	...
16	20¾	13	10½	.	.	.	...	...	...	...	...	...
17	25	26	9	.	.		...	...	...	...	...	...
18	25	26	26½	23	26¾	25	27	25	27	26	26	27
19	26	24	27	23	27	22	26	25	25½	19	26	26½
20	26	26	22	16½	27	24	32	25	27	26	26	27
21	25½	26	26	16½	25½	25¾	42½	23½	27	26	26	25
22	24½	25½	26½	23	27	20	25	23½	24½	22	26	26½
23	26	26	26	23	25	21	27	25	27	26	15	27
24	19½				...	.	.	.	.	...	...	...
25	26	26	23½	14	11	15	...	21½	25½	24½	22	26½
						Weaving Department.						
26	19	25	21	22	26	19	...	16	25½	15	26	27
27	26	25½	27	22	27	23½	26	13	...	...	11	17
28	12	26	23	20	27	24½	27	3	12	..	22	7
29	20	12		23	14	21	27	24	27	26	26	16
30	.	23	22	23	16	26	11	25	27	26	6	19
31	14	17	2	22	23	26	4½	23½	27	23	24	26
32	10	18	14	22½	19	...	...	...	...	...	...	...
33	19	2	20	4	..		...	..	..	...	.	..
34	20	25	25	15	9	3	21	21	27	26	26	23
35	10	12½	2	23	26	19	13	24	24	21	26	6
36	21	23	27	19	...	...	..		...	..	...	...
37	22½	24½	23	12	3	23	23	23½	24	23	10½	9
38	20	26	14	.	...	.	..	...	...	. .	...	...
39	22	26	27	22	25	23	25	...	24	25	25	18
40	12	23	26	21	27	24	26	...	12		26	14
41	26	26	24	20	11	26	27	21	12	...	...	...
42	24	24	23	20	26	8	...	...	...	...	..	..
43	23	26	25	22	24	18	27	...	26	25	24½	27
44	26	23½	23	21	18	16	26	...	17	23	7½	...
45	16	...	...	...	...	...	...	...	...	...	...	...
46	20	9	.	...	...	...	...	...				
47	22	21	20	13	15	24	20	16	15	25	22	24
48	25	22½	23	23	24	6	...	...	...	. .	...	
49	22	24	23	23	6	3	23	25	27	26	24	27
50	22	26	27	23	6	4	24	24	27	25	24	25

BROACH—BOMBAY.

Serial no. of factory.	Notes.
	BROACH.
11	*Cotton spining and weaving.*—The mill is fitted with electric light; the men complain of this, and say it hurts their eyes. They struck work on account of the use of electric light two days before the Commission arrived at Broach. They were induced to return to work by the manager stating that Government would soon prohibit night working. The men object to the long hours worked, as preventing them from shopping, and attending properly to their private affairs. The compound of the mill was large and in excellent order, sanitation good; the latrines had the proper number of seats, according to the Act, and were very clean and well looked after. Water is obtained from a well; the supply appears to be satisfactory, but the method adopted for distributing the drinking water is susceptible of improvement. Forty-four half-timers were examined, out of a total of 47 on the rolls for the morning shift; 7 appeared under 9, and 4 of those above nine would probably have been rejected under a physical fitness test. All the children were certified, and were easily identified. Twenty-one young adults were examined; 2 appeared to be under 14 years, and 2 others were physically unfit for a full day's work. The mill works from daylight to 7-45 P.M., as a rule; on some days it works till 8-30. The longest day was from 5-35 to 8-30, with the usual interval (10th June 1907). Fifteen men from the carding and spinning department were weighed, average 96·2 lbs. each. Twenty weavers were weighed—average 104 lbs. each, general average 100½ lbs. Eighty-nine passes are issued for 644 men and 124 women. They are not very strict as regards the passes for women, but for men the pass system is strictly enforced. Children come and go as they like without passes. In some cases, the passes are not always fully taken advantage of. The usual meal time of the operatives is from 10 to 11 A.M.; they do not eat, as a rule, during the midday interval. The Company has a chawl for the operatives, with 75 rooms. One family occupies a room, and the rent is eight annas *per* room *per* month. The rooms are 10 × 12, and were in very good condition.
12	*Cotton spinning and weaving.*—The mills work by day-light only; no electric light is fitted. Longest day from 5-33 A.M. to 7-43 P.M. on the 20th June 1907. Shortest day from 6-58 A.M. to 6 43 P.M., with the usual interval. This was in January. Eighty-five half-timers examined, out of 88 on rolls; 4 appeared under 9, and one other over 9 was physically unfit for half-time work. Twenty-five young adults were examined; of these 2 appeared under 14, and 1 of these 2 was physically unfit for a full day's work. Latrine accommodation according to the Act, the seats were rather dirty. The water supply is from a well, and the water is pumped up to convenient places for use. Weighed 58 men—28 from the carding and spinning departments, average 96 lbs., 30 from the weaving department, average 106 lbs. General average 101·4 lbs. Ventilation good, whitewashing satisfactory. There are no emergency fire exits, merely a few narrow iron staircases which would be practically of no use in the event of fire. Three hundred and four men, 117 women, and 180 children are employed. In the separate weaving mills there are 422 adult males. Passes—one for every eight men—are granted. Children are taken out, when they are not required for doffing, by the jobbers. Jobbers are not required to provide labour, as there is no competition. There is no stealing of labour between the few mills here.
	BOMBAY.
13	*Cotton spinning and weaving.*—Working time from about 5-30 A.M. to 7 P.M. The mill is fitted with electric light, and the average working day is about 13 hours. 1,280 men, 157 women, no children, employed. There is a half-hour recess at midday. The mill compound is very cramped, the buildings old, and the arrangement of them bad. The fire exits are not suitable, the doors opening inwards. The muster rolls show that the operatives take on an average about 3 days off in the month, in addition to holidays. Thirty-three latrines, many workers waiting at them. The latrines were in a most insanitary condition. The workers, as a body, looked very healthy. Twenty-two immature adults were examined; all were over 14, but as a rule they were not equal to a full day's hard work. Ten adults, employed in mills all their lives, were weighed—average weight 103 lbs. Fifteen men from the spinning department, chosen at random, were weighed—average 98. These were all younger men. General average 102 lbs. Approximately 70 substitutes were employed, and the rolls showed that about 10 *per cent.* of the hands were always absent. Certain of the engine room staff work $\frac{3}{10}$ days a month, without any compensating holidays; they are paid full time for half a day's work on the Sundays and holidays.
14	*Cotton spinning and weaving.*—This is a new mill. Work begins about 5-40 A.M., and the engine runs till 7-15 P.M., with half an hour's recess at midday. The mill is fitted with electric light; the ventilation and lighting were good. Thirty-five latrine seats for 1,800 operatives. No half-timers are employed. The fire exit arrangements were unsatisfactory; few exits are provided, and in many cases the doors open inwards. Out of 1,725 workers on the rolls at the time of inspection, 215 were absent and 60 substitutes were employed. The day, being one of the usual *dewali* holidays, was somewhat

BOMBAY—*continued.*

Serial no. of factory.	Notes.
14 *contd.*	exceptional in this respect, however. Fifty immature adults were examined; these were all full-timers. Of these 10 were considered under 14, though they had been passed by medical officers. Extra time is paid for work in excess of 12½ hours a day. The manager estimates that the operatives spend about 1½ hours a day in slacking about in the mill compound. The medical certificate book was examined; the distinctive marks recorded were, in the opinion of the medical members of the Commission, useless. Operatives looked healthy; the number of young adults was higher than usual. Twenty-five mature adults weighed—average 97 lbs.
15	*Cotton spinning.*—According to the register, 22 children were at work on the morning shift; all were produced before the Commission. All were over 9 years of age, but 6 out of the total were weedy, and not up to the normal standard of development. The mill works day and night; no children are employed at night, and only about 60 women, the latter exclusively in the reeling department. During the day 234 women are usually at work there. In order to attract night workers—women—they are paid one and-a-half times the ordinary rate for their production during the night. Compound large and open; ventilation in the mill good. All young adults were inspected; all were over 14, but some were badly developed, and not fit for a full day's work. Fifteen normal workers were weighed; their average was 101 lbs.
16	*Woollen mill.*—No children are employed. Young adults were inspected, but none under 14 years of age were found. The operatives were particularly healthy looking. There is no night working in this mill. The hours are from sunrise to sunset, *i.e.*, the mill works while there is light enough to work properly. Ventilation good. Latrine accommodation ample; but the system is most defective, and the cess-pool had apparently not been emptied for some days. Eleven workers were weighed; their average was 108 lbs.
17	*Dye works.*—Two hundred and forty operatives. No children and women employed. No night work. Electric light is fitted for use in emergencies. All young adults were inspected; none under 14 years of age were discovered, but a few of the young full-time workers were fit only for employment for full time on light work. The factory works from 7 A.M. to 5 P.M. save on special occasions. There is no work after 7 P.M. in any case, as the operatives refuse to work longer than that. Ventilation good. Ten workers weighed, average 108 lbs.
18	*Flour mill.*—Seventy-eight men on the day shift, including coolies, 51 on the night shift, twenty women are employed on light work, they do not work in the machinery rooms. No children are employed. The mill runs throughout the week, during the whole 24 hours, the shifts are from 6 A.M. to 6 P.M. and from 6 P.M. to 6 A.M. The shifts are changed once a week —on Sunday, which is, save in exceptional circumstances, always a holiday. No stated time is fixed for meals; the workers relieve one another. They have approximately one hour off in the course of the day shift, and they can distribute this time as they like. Control is less effective during the night shift, and the period during which the hands are off work is probably greater. The employés are paid, on the 25th of each month, the amounts earned by them during the preceding month. The majority of the hands stay at their work throughout the whole year, and many are old employés of the firm. A bonus is given to the workers each year, the sum depending on the profits made during the year, and the total amount being distributed among those who have been in the employment of the firm for more than one year at the time of the distribution. Men with over three years' service are paid double the sum given to those of over one and less than three years' service. The ventilation in the mill rooms was excellent, the latrine accommodation—5 for 150 men—was in very good condition. The operatives appeared well nourished and healthy; ten men were weighed, average 95 lbs.
19	*Iron works.*—The operatives work 9 hours a day, or 54 a week; for "overtime," *i.e.*, time worked in excess of a total of 54 hours in the week, they are paid at the rate of a full day's pay for eight hours' work. Overtime is not systematically resorted to; speaking generally, the firm find that a nine hours' day is the most economical for their class of work. Working by artificial light is difficult, and not economical; the system was tried, and rejected. The great majority of the employés are skilled workmen, of excellent physique, and they are highly paid. In the circumstances, a detailed examination of the works or operatives was not made.
20	*Flour mill.*—The mill employs about 220 hands all told; they work in day and night shifts, the mill running continuously day and night except on Sundays. The men working on the night shift work on the day shift the following week. Day shift is from 6 A.M. to 6 P.M. and night shift from 6 P.M. to 6 A.M. The night shift only numbers about 60 men, but two or three times a month when special orders are received a few of the day shift are kept till 9 P.M., for this ¼ day's wage extra is given. Men are never worked more than 15 hours; the ordinary period is 12 hours. The men have an hour's interval, half of the number from 12-30 P.M. to 1-30 P.M., the other half from 1-30 P.M. to 2-30 P.M. There is no regular interval for the night shift, they arrange their own

BOMBAY—*continued.*

Serial no. of factory.	Notes.
20 *contd.*	intervals for eating. No children are employed and only a few women in the day time. Ten employés, who were probably above the general average of the men in the mill, weighed on the average 113 lbs each. In the wheat drying room, the lighting and the ventilation were most defective; throughout the wheat preparing department the ventilation appeared to be inadequate.
21	*Cotton spinning and weaving.*—Employs 3,500 adult males, 800 adult females, 191 half-timers; total 4,500 hands. Of these about 400 on an average absent themselves daily and from 100 to 125 substitutes are employed. Mill works only by day-light, the longest hours worked in 1906 being 12 hours 51 minutes on 14th June 1906 from 6-2 A.M. to 7-23 P.M., and the shortest 10 hours 53 minutes on 6th December 1906 from 6-55 A.M. to 6-18 P.M., excluding the midday interval. The average number of hours worked a day in each month in 1906 was as follows: January 10 hours 51 minutes February 11 hours 8 minutes, March 11 hours 46 minutes. April 12 hours 5 minutes, May 12 hours 32 minutes, June 12 hours 33 minutes, July 12 hours 21 minutes, August 12 hours 8 minutes, September 10 hours 57 minutes, October 11 hours 19 minutes, November 10 hours 53 minutes, December 10 hours 52 minutes. There is no system of passes for going outside the mill during working hours, but it is estimated that each worker goes out for about 1½ to 2 hours a day. The carding master believes that about 25% of the hands work steadily without taking extra holidays and that the rest take about 3 days "off" a month, excluding Sundays, and many go to their homes for cultivation for 2 or 3 months during the rains. There are about 500 youths certified as over 14 at work; of these a large proportion appeared to the Commission to be under 14, and immature. Seventy such were actually picked out and marshalled: they all were mere children, though sturdy and of good physique as a rule. Such boys are specially useful, on account of their short stature, for work at ring frames, and command comparatively high wages—from Rs. 7 to Rs. 10½. Examined 155 half-timers: of these 12 seemed under 9, though certified over that age, and 5 would probably have been rejected if certificates of physical fitness were required. On the whole the half-timers, especially the girls, seemed a very healthy lot. Wage of all half-timers is Rs. 4-8. Weighed 20 men in carding and spinning departments, average 102 lbs. The average of 30 in weaving department was 105 lbs.; general average of 50 was 104 lbs. The adults seemed a healthy lot. Carding master states that production *per* hour is higher in short than in long working days. Latrines 94 seats, of which 10 were locked; fairly clean, no waiting about, water supply good, but taps insufficient and a crush of workers round them. Openings for ventilation good if all used. No emergency exits, doors open inwards, fencing good. Mill provides 183 quarters for operatives, rent Rs. 2-8 *per* room. Wages paid on 25th of each month for the previous month. Mill provides a school for the half-timers: about 75% of them attend it voluntarily. The practice here is for all children to remain inside the mill compound, either in the school or outside, during the intervals between their periods of work.
22	*Cotton spinning and weaving.*—Employs 2,269 adult males, 329 females and 65 half-timers, total 2,653. Half-timers are worked in two shifts—

A from 6 A.M. to 9-30 A.M.
1 P.M. to 4 P.M.
B „ 9-30 A.M. to 12-30 P.M.
4 P.M. to 8 P.M.
} During the intervals they stop in a room in the compound, where a school is held.

The mill worked 15 hours daily in 1905, from 5 A.M. to 8 P.M.; and then from October 1905 till June 1907 tried a 12 hours' day, but has now had to abandon this because the best hands began to leave and go to mills where the hours were longer, and they could therefore earn more. Mill works at present from 6 A.M. to 8 P.M. Examined all half-timers of A shift, 32 in number; six appeared under 9 years, all were physically fit and were a healthy lot. Examined 72 young adults, 24 seemed under 14 years, and 2 of the remainder would have been rejected if certificates of physical fitness had been required. Latrines—60 seats, fairly clean and no people waiting. Water supply good. Guarding of machinery excellent. Ventilation (ridge) excellent. Weighed:—

40	adults from carding and spinning department,	average	106 lbs.
30	„ „ weaving „ „	„	104½ „
70		average	105½ lbs.

23	*Cotton spinning and weaving.*—One of the oldest spinning and weaving mills in Bombay. mploys 1,112 adult males, 231 females, and 28 half-timers; total 1,381. Works at present by day-light only, but in 1905 worked very long hours for some months by electric light, up to 15 hours in some cases (*i. e.*, from 5 A.M. to 8-30 P.M., with midday interval of ½ hour). Examined 13 half-timers, all physically fit, but 3 seemed under 9 years. Selected 20 young adults from spinning department; of these 9 seemed under 14 years, and unfit for a whole day's work. Latrines—26 seats, clean. No waiting. Ventilation good. Weighed:—		

20	men from carding and spinning department,	average	100½ lbs.
15	„ weaving „ „	„	97 „
35		Average	99 lbs.

Many of the weavers here are elderly men of the *Julai* caste.

BOMBAY—*continued.*

Serial no. of factory.	Notes.
24	*Cotton spinning and weaving.*—Works only by day-light. A comparison of the actual hours worked here with the times of sunrise and sunset given in the almanac shows that work begins ordinarily ¼ hour before sunrise and ends ¼ hour after sunset. Actual working hours range from 13 hours 15 minutes in summer to 11 hours 5 minutes in winter. Number of hands employed is 1,552 adult males, 200 females, and 97 half-timers; total 1,842. Examined 40 half-timers in A shift, 10 of them seemed under 9 years, though certified over that age. In spinning department, 131 young adults were collected, of whom no less than 56 appeared to be under 14 years, and not up to a whole day's work, though apparently certified as over 14 years. Thirty-three seats in latrines; this is below the prescribed standard; no waiting outside. No ridge ventilation in the weaving room. Weighed:— 15 men in carding and spinning department, average 97 lbs. 28 „ weaving „ „ „ 106 „ Average 102 lbs.
25	*Silk mill.*—This silk mill employs 782 adult males and 266 women; total 1,048: no half-timers: it works only by day-light. The shortest day in 1906 was 11 hours 35 minutes, and the longest 13 hours 20 minutes. Examined 21 young adults, all were certified over 14 years, but 6 of them appeared to be under 14. Weighed 20 men, average 111 lbs. Physical condition of operatives good, several of the women were wearing gold ornaments. Ventilation and guarding of machinery good. Arrangements in gassing room excellent and all men working there looked healthy. Latrine—22 seats, clean; no waiting outside. Water supply good.
26	*Manufacture of tins for casing bulk oil.*—The factory works short hours, and the men all looked healthy: no half-timers. Latrine accommodation specially good, the latrines being connected with the main sewage system.
27	*Cotton spinning and weaving.*—Working hours from 6-4 A.M. to 8-9 P.M. Inspected shortly before 8 P.M. The carding and preparation rooms (the only part of the mill at work) were badly lit, and there was no ventilation, all windows were closed, and the air was hot and oppressive: the perspiring workers looked dull, listless and exhausted, and the few children half-dazed. The workers waited outside the mill after leaving, and in reply to questions stated that they were unanimously in favour of legislation to restrict the hours of labour, though that might entail a decrease of piece-work wages.
28–29	*Cotton spinning and weaving.*—Inspected at about 7-30 P.M. The conditions in both mills were practically identical; a large number of half-timers were at work; the atmosphere was stiflingly hot; and all the windows were closely shut. The temperature in one of the mills, in the spinning room, was 98½ degrees Fahrenheit. The operatives did not appear exhausted. None were loitering about in the compound.
30	*Cotton mill.*—Inspected 8 A.M. on Sunday Surprise visits were paid to this, and to the following cotton mills down to no. 42, in order to ascertain the extent to which working on Sunday was resorted to. No one working at the mill, except a few mechanics fixing a countershaft.
31	*Cotton mill.*—Portion of boiler staff, engine staff, and a few general mechanics at work, also 15 cloth folders.
32	*Cotton mill.*—In full work; due notice had been given.
33	*Cotton mill.*—Portion of boiler, engine, and general mechanic staff at work.
34	*Cotton mill.*—Boiler, engine, and general mechanic staff at work; also 5 women reelers.
35	*Cotton mill.*—Boiler, engine, and general mechanic staff at work; also 35 folders and cloth stampers.
36 to 42	*Cotton mills.*—No one at work. No cleaning of machinery.
43	*Cotton spinning only.*—Present hours of work are from 5-30 A.M. to 7-30 P.M. in summer and from 6 A.M. to 7-30 P.M. in winter. Mill worked from 5-30 A.M. to 8-30 P.M. in June 1905, when very long hours were being worked elsewhere. No shifts. The mill was stopped, by the courtesy of the manager, at 8 A.M. on the day of the Commission's visit and all hands (male) were mustered outside. There were 889 male full-timers, of whom 204, or 23 *per cent.*, appeared to be under 16 years: of these 29 appeared to be under 14 years, and unfit for a full day's work. There were 20 half-timers, of whom 4 appeared to be under 9 years, though certified as over 9. The general physique of the workers was excellent, there was a remarkable absence of skin disease or other indication of mal-nutrition. Only one had marks of tuberculosis of glands. The men were a big lot, 60 were weighed, giving an average of 102 lbs. The young adults were a healthy lot, half-timers were rather weedy.

BOMBAY—*continued.*

Serial no. of factory.	Notes.
43—*contd.*	The 539 women employed in the mill were inspected at their work: only 15 of them appeared to be under 16 : they were generally a healthy lot.
44	*Cotton spinning only.*—The mill employs 520 male adults, 328 females and 34 half-timers, and works only by daylight. When the Commissioners entered the mill there was a general stampede of children to any possible hiding place and it was impossible to inspect them inside the mill : subsequently the management produced from the mill 61 children of whom— (*a*) four were uncertified half-timers, 3 of them being obviously under 9 years; (*b*) twenty-four were certified half-timers, though the total number in the shift was only 17: there were thus 7 of the second shift working at the wrong time: all appeared over 9 and physically fit; (*c*) thirty-three were certified full-timers, though 13 of them appeared to be under 14 years. The physique of the adults and children was very good. A so-called school is said to be held in a large cotton bale godown, but the arrangement appeared to be worse than useless, because it only facilitates the breaking of the law as to the working hours of half-timers. The school was not opened when the Commission visited the mill at 9 A.M., though the first shift of half-timers ought to have, but had not, been relieved at 8-45 A.M.
45	*Cotton spinning only.*—The mill employs 661 adult males, 330 females, and 31 half-timers: it works 12 hours a day. Of 14 certified half-timers examined, 2 seemed to be under 9 years. Of 40 young full-timers examined, 14 seemed to be under 14 years, though certified over that age, the others were all physically fit. Weighed 33 adult men, average 97½ lbs. Latrines 24, seats clean and no waiting outside : fire exits ample, some doors open inwards, others outwards. Ventilation good. The personal marks entered for purposes of identification in the half-timers' certificates were not sufficiently distinctive to enable a child to be identified beyond doubt—the same marks being frequently entered in different certificates. The certifying surgeon is stated to receive Rs. 30 from the mill for one visit a month, and Rs. 10 extra if a second visit is paid: in November 25 certificates were given by him on the 2nd, and 21 on the 11th.
46	*Cotton spinning and weaving.*—Employs 1,231 male adults, 150 females, and 76 half-timers: works only by daylight. Daily average of absentees is 158, or rather over 10 *per cent.* Half-timers are supposed to work in two sets— A—38 in number from start to 9-30 A.M. and from 1-30 to 4-30 P.M. B—38 in number from 9-30 A.M. to 1 P.M. and from 4 to closing time. But when the Commission visited the mill at 8 A.M. besides all of A set, 33 of B set were inside the mill premises, most of these being produced from the spinning department where they had presumably been at work. There is a so-called school held in a large godown, where 3 children were found sitting, Of the 33 half-timers of B set, only 6 could write the simplest words: all of these had been taught in Government schools elsewhere: none of the remaining 27 could write. It is obvious that such a school is useless, and only facilitates infringement of the law. Seventy-one certified half-timers examined, of whom 11 appeared to be under 9 years. Out of a very large number of young adults 66 were examined, of whom 13 seemed to be under 14 years. Weighed 30 men of carding and spinning department, average 105 lbs. Weighed 30 men of weaving and spinning departments, average 106 lbs. Men and children were all a strong and healthy lot. Latrines 34, clean and no waiting about. Water-supply and ventilation good.
47	*Oil mill.*—Works day and night with two shifts —day shift of 96 men from 6 A.M. to 6 P.M. and night shift of 88 men from 6 P.M. to 6 A.M., the men changing from day to night shift and *vice versâ* every month. In each shift double the number of men actually required for the work is employed, and each man has one hour's rest after each hour's work, so that a man does only 6 hours' work a day. The work is hard. The workers (all adults) were a strong and healthy lot. Wages Rs. 11-8 to Rs. 18 a month. Average daily number of absentees is only 2 or 3 *per cent.* The men take holidays to their country (Ratnagiri) at least once a year.
48	*Cotton spinning only.*—Mill was stopped, by courtesy of the manager, at 8 A.M. on day of inspection, and all the male operatives were mustered outside and inspected. The total number of whole-timers, male, was 584: of these 142, or 24 *per cent.*, appeared to be below 16 years of age, and of these latter 35 appeared to be below 14 years, and therefore unfit for a full day's work, though certified as over 14 years. The 426 adults, though as a rule slight in build, were in good physical condition: none of them showed any signs of tubercular disease of glands or joints, and there was a remarkable absence of skin disease. Weighed 30 adults (carding and spinning departments) ; average weight 94 lbs. There were, besides, 16 half-timers, rather an undersized lot, of whom 4 were apparently under 9 years, though certified over that age. The 450 women were inspected at their work: they were a strong, healthy looking lot: of the total number about 15, or 3 *per cent.*, appeared to be under 16 years of age.

BOMBAY—*continued.*

Serial no. of factory.	Notes.
49	*Cotton spinning and weaving.*—Employs 1,023 male adults, 233 females, 24 half-timers—total 1,280. Works in November from 6 A.M. to 7 P.M. and in June from 5-20 A.M. to 7 P.M. Examined 9 half-timers, all seemed over 9, and in good condition. Found among the adults 17 boys who, though certified to be over 14 years, were apparently under that age, and were not fit for a whole day's work. Latrines 30, seats clean, and no waiting outside. Water-supply good, but taps insufficient. Ventilation excellent. Weighed— 15 men from carding and spinning departments, average 98 lbs. 20 „ „ weaving „ „ „ 101 „ Average of 35 100 lbs. The women in the reeling room were all in good condition, most of them wore at least one gold ornament each. Their earnings are from Rs 6 to Rs. 12 a month. The daily percentage of absentees during the last month was as follows:— Carding and spinning department . . . . 18·2 % Weaving „ „ . . . . 13·4 % Reeling and winding (womens) . . . . 29 6 % The mill has got some workmen's *chawls* attached. In one room measuring 12′ × 10′ and 9′ high (for which Rs. 4 a month was paid) a mill hand, Ramjee Laxuman, was found living with his aunt, an old woman, and 5 adult boarders, each of whom pays Rs. 5-8 a month for board and lodging. The old woman takes their first meal to them at the mill at 7 A.M, then they come back at noon for the midday meal, and they have supper at night after work. Ramjee earns Rs. 16 a month and remits his savings to his native country. In another room with a separate cook-room attached (rent Rs. 7) lived Govind Malu, earning Rs. 12 in the mill, his wife earning Rs. 6, his sister earning Rs. 6, and two children, one of whom earned Rs. 3 as a half-timer.
50	*Cotton pressing.*—Found everything in order, the only work at present (November) is pressing waste for export to Germany.
51	*Cotton spinning and weaving.*—Employs 1,136 adult males, 168 females, and 109 half-timers—total 1,410. Half-timers divided into 2 sets—A, 57 and B, 52. At time of visit (8 A.M.) all A set were in the mill, and of B set (whose turn is not till 9-30 A.M.) 12 were in the mill, and 40 in the so called school. The attendance book of half-timers had not been written up for six days. Of 69 certified half-timers examined, 8 were clearly under 9 years. There was a very large number of young adults in this mill, hardly any grown up men being seen in the carding and spinning departments; 47 of the youngest were selected and examined; of these 9 were certainly under 14 years, 4 having 3 or 4 milk teeth indicating 11 years or under. Weighed— 15 adults from carding and spinning departments—average 101 lbs. 40 „ „ weaving „ „ „ 103 „ Operatives were a healthy looking lot.
52	*Cotton spinning and weaving.*—Employs 1,538 male adults, 47 females, and 31 half-timers—total 2,039. Examined 21 half-timers, all were over 9 years. Selected and examined 77 young adults from a very large number at work: of these 18 were certainly under 14, and of these 7 were obviously under 12 years, judging by their teeth. Operatives were a healthy lot.
53	*Spinning and weaving.*—Eight miles from Bombay, works only by daylight, 5-48 A.M. to 7-33 P.M. in summer, and 6-55 A.M to 6-35 P.M. in winter. Employs 1,952 male adults, 586 female adults, and 6-05 half-timers. The reasons for the large number of half-timers here are (*a*) that the certifying surgeon in this district has adopted a stricter age test for young adults than the surgeons in Bombay do, and (*b*) that the local population being small, more adults cannot be got. The certifying surgeon as a rule does not pass a child as over 14 years unless he is over 56 inches in height, and otherwise appears over that age. The manager has complained to the district authorities that it is unfair to apply to his operatives a stricter test than obtains in Bombay; and it is a fact that many boys who have been refused certificates as over 14 years here have got employment as full-timers in Bombay mills. For half-timers a standard of 48 inches height seems to have been adopted, but children are passed as small as 46½ inches if other signs indicate 9 years. Weighed— 35 men in carding and spinning departments average 106 lbs. 30 „ weaving „ „ „ 110 „ Average of 65 108 lbs. The men are a heavier and finer lot than in the Bombay mills; examined 260 half-timers, of these 46 appeared to be under 9 years, but all were healthy and fit, with no signs of tuberculosis.

BOMBAY—*continued.*

Serial no. of factory.	Notes.
53—*contd.*	Latrines 67, clean, 20 separate urinals: no waiting about Water-supply and ventilation excellent: fencing especially good. Mill provides 197 rooms in *chawls* for operatives. Manager thinks that discipline of mill hands is getting slacker than before, as men are becoming more independent.
54	*Tanning and boot factory.*—Employs 658 hands, of whom 46 are half-timers. Examined 20 half-timers, of whom 2 appeared to be under 9. No cases of anthrax are known ever to have occurred; very little dust Workers are a sturdy lot.
55	*Paper mill.*—Employs 36 men and 36 women: works 12½ hours daily: no night work. Women earn Rs.7½ a month, men from Rs. 10 upwards. Arrangements for extracting dust from rags are very imperfect: a fan is required at the outlet of the willey, and a dust chamber with a steam pipe to lay the dust, which can then be burnt. As it is, the room in which the rags are cut up is filled with dust, which must be highly injurious to the health of the women working there. Some imperfections in the fencing were also noticed and pointed out.
56	*Cotton spinning only.*—The Commission visited the mill at 8-30 P.M. The total number of employés is 1,616 and is made up of male adults 956, female adults 650, and "half-timers" 10. Average number of absentees about 250. The engine starts at 5-45 A.M. and stops at 7-30 P.M. with an interval of half an hour at noon. The longest hours were worked in 1905, from 5-45 A.M. to 8-30 P.M. with half an hour's interval. 77 young adults were examined, and of these 13 appeared to be under 14 years of age. There are only 5 half-timers on A shift, and of these 3 were examined; all appeared to be over 9 years of age. Physique of the adult operatives is good, of the young persons fair, and of the children good. The mill is well ventilated. The latrines are clean, and provide 24 seats, which is under the required number, but no persons were waiting about the latrines owing to want of accommodation. 20 employés were weighed, average weight 105 lbs. The fencing of the machinery is satisfactory. The emergency exits are sufficient—sliding doors of iron.
57	*Cotton spinning only.*—The Commission inspected this mill at 7-30 A.M. The total number of employés is 1,144, made up of male adults 676, female adults 415, and half-timers 50. The half-timers are employed in two shifts, which work morning and afternoon respectively. Daily number of absentees about 200. Total number of half-timers examined 14; of these only 1 appeared to be under 9 years of age. Total number of young adults examined 41; of these 11 appeared to be under 14 years of age. The physique of all the operatives, adults, young adults, and children, appeared to be very good. There are 22 seats in the latrines, and the latrines are clean—no persons were waiting about for want of latrine accommodation. The water-supply and the ventilation are satisfactory. The fencing of the machinery is adequate. The engine at present starts at 6 A.M. and stops at 6-20 P.M., with half an hour's interval. The mill has electric light, but it is not used at present. Longest working hours were in the year 1905 (14½ hours' actual engine working) between 5-30 A.M. and 8-30 P.M. 44 hands were weighed, average weight 102 lbs. Emergency exits ample—mostly iron sliding doors, in other cases the doors open inwards.
58	*Flour mill.*—Employs 128 adult males and 10 females—total 138: works day and night with 2 shifts of work people— 6 A.M. to 6 P.M., and 6 P.M. to 6 A.M.—the shifts changing from day to night work and *vice versâ* once a week, after the Sunday holiday. Each man of the night shift is allowed to sleep for 2 hours during the night, the times being arranged by the men themselves, and the watchman seeing that no man takes more than 2 hours. Should a man of the night shift fail to come to work, owing to sickness or other cause, the corresponding man of the day shift has to continue working throughout the night, *i.e.*, for 24 hours on end (being allowed however 3 hours to go and get his food) and then gets 12 hours' rest, returning in the evening to the night shift—a substitute being engaged for the day. The manager explains that this arrangement is necessary, as substitutes cannot be obtained at night for night work: they only come in the morning. This only applies to the 12 hands in the engine and milling departments. The books show that on an average three men a day work those double shifts of 24 hours, and that no one man worked more than 3 double shifts of 24 hours each in the course of the month. The following were the number of men on double shifts on each day of the month:—

Date.	(47 workers) Milling staff.	(14 workers) Engine staff.	Total.	Date.	Milling staff.	Engine staff.	Total.
1	0	1	1	4	8	0	8
2	0	1	1	5	0	1	1
3	1	1	2	6	0	7	7

BOMBAY—*continued.*

Serial no. of factory.	Notes.							
58—*contd.*	Date.	Milling staff.	Engine staff.	Total.	Date	Milling staff.	Engine staff.	Total.
	7	2	5	7	19	0	7 Tuesday.	7
	8	3	3	6	20	2	7 Wednesday.	9
	9	1	2	3	21	0	0	0
	10	0	0	0	22	1	0	1
	11	3	0	3	23	0	0	0
	12	0	7 Tuesday.	7	24	0	0	0
	13	3	7 Wednesday.	10	25	1	0	1
					26	2	7 Tuesday.	9
	14	3	0	3	27	2	7 Wednesday.	9
	15	2	0	2				
	16	2	0	2	28	1	1	2
	17	0	0	0	29	0	1	1
	18	2	0	2	30	0	1	1
					TOTAL	39	66	105

For the first 6 days of December there were 13 men on double shifts. The engine room workers change shifts on Tuesday, as they are employed all Sunday cleaning the engines.

59 *Wool cleaning and pressing* —Employs only 22 permanent hands: a number of temporary hands are employed by the owner of the wool: only Indian sheep wool is sorted, no Persian wool: arrangements are fairly good, and there is no dust of a harmful nature: the factory is not under the Act.

60 *Bone crushing mill.*—Employs 35 hands, and is not under the Act: the factory is only an open shed; arrangements seemed to be suitable.

61 *Small steam flour mill.*—Not under the Act; employs 30 men who have frequently to work long hours' overtime. The following number of hours were actually worked, without shifts, on six days in August 1907:—

August 1907.
8th—17 hours.
9th—17 „
10th—12 „
11th—24 „
12th—12 „
13th—24 „

The manager explained that the men had of course to be allowed to go away for their meals at intervals during these long hours; but no shifts were arranged. The ordinary hours are 12 daily, but overtime is worked as the trade demands. Accommodation very cramped.

62 *Cotton spinning and weaving.*—Inspected the operatives in weaving and connected departments with a view to ascertain the percentage of young adults' age, 14—16, in these departments. The following was the result:—

Department.	Total no. of workers.	No. of	
		Boys 14—16.	Women.
Weaving	438	19	...
Winding, drawing, sizing, etc. . . .	156	48	82
TOTAL .	594	67	82

giving 10 young adults (14—16), or 25 young adults and women, *per* 100 workers. In the weaving shed alone the young adults were only 4 *per cent.*

BOMBAY—JALGAON.

Serial no. of factory.	Notes.
63	*Cotton spinning and weaving.*—Inspected the operatives in weaving and connected departments, with a view to ascertain the percentage of young adults, age 14—16, in those departments. The following was the result:—

Department.	Total no. of workers.	No. of	
		Boys 14—16.	Women.
Weaving	990	31	...
Winding, drawing, sizing, etc. . . .	404	60	150
TOTAL .	1,394	91	150

giving 6 young adults, age 14—16, or 17 young adults and women, *per* 100 workers. In two weaving sheds alone the young adults were only 4 *per cent.* Inquiry was made as to hours worked by engine and boiler staff. The boiler staff is divided into 2 shifts—day shift of 35 men who work from 5-30 A.M. to 7 P.M., and night shift of 6 men, on duty from 7 P.M. to 5-30 A.M.; the engine room hands (29 in number) work from 5-30 A.M. to 7 P.M.; the mechanic staff (33 hands) work from 7 A.M. to 5-30 P.M. Work on Sunday from daylight to 1 P.M. in cleaning machinery, etc., is treated as overtime, and paid for as one whole day's work. On an average each of the hands in these departments absents himself from work for 3 days a month, exclusive of fixed holidays.

64 *Cotton spinning.*—Employs 833 adult males, 456 females and 12 half-timers. Half-timers are employed in two sets of 6 each. "A" set works from starting of mill to noon, and "B" set from 12-30 P.M. to closing time. "B" set comes to mill in the morning, and saunters about in the compound up to 12-30 P.M. The "A" set after leaving mill at 12 o'clock are kept within the mill premises up to 4 or 4 30 P.M. This is done, it is said, to prevent the children working in another mill. Ventilation good. Water-supply satisfactory. Fire exits satisfactory; latrines, 48 seats, clean, nobody waiting for admission. Fencing of machinery good. No electric light. The mill works from daylight to dark, all the year round. 23 young adults examined, of whom 4 appeared to be under 14; 8 half-timers examined, all appeared to be over 9. Weighed 21 men, average weight 100 lbs.

65 *Cotton spinning.*—Employs 900 adult males, 500 females and 72 half-timers. The latter are employed in two sets, each containing 36. "A" set works from morning to noon, and the "B" set from 12-30 P.M. to closing of mill. General health of operatives good. Ventilation good. Latrines, 20 seats, clean, no one waiting for admission. Water-supply good. 25 half-timers examined, of whom two appeared to be under 9 years of age. Fencing of machinery satisfactory; fire exits sufficient, but doors open inwards. Examined 23 young adults, of whom 8 appeared to be under 14 years of age. Engine starts at 5-40 A.M. (S.T.) and stops at 12-40 P.M. Starts again at 1-10 and stops at 8-10 (S. T.), total working time 14 hours. In 1905 the working hours were 14½. Mill works with electric light. Weighed 30 men, average weight 100 lbs.

66 *Mint.*—All operatives work 7 hours a day only, except furnacemen who work 8 hours. Wages vary from 8 annas to 12 annas a day for unskilled labour.

67 *Printing press*—Total number of operatives is 275 to 300: all are male adults over 17 years. No females or children are employed. The ordinary working hours are from 9 A.M. to 5-30 P.M. with half an hour's interval. Excepting Sundays, the men generally work overtime up to 9 P.M. Two shifts are employed in the newspaper department, the day shift working from 9 A.M. to 9 P.M., and the night shift (consisting of 10 people) from 9 P.M. to 5 A.M. Sunday is observed as a holiday excepting in the newspaper department, in which Saturday is allowed instead. Ordinary wages range from Rs. 8 to Rs. 30 a month. Overtime is paid for at the rate of one pie *per* rupee of the ordinary salary *per* day. The wages for a month are paid on the 25th of the following month.

JALGAON.

68 *Cotton pressing.*—Sixty-five men are employed, and are paid according to the number of bales pressed. Each man gets about 11 annas *per* 100 bales pressed. The opener is the usual type of toothed single opener, only men work in front of it. Atmosphere thick with cotton fluff. Noticed that some cotton lying outside awaiting pressing had been watered to add weight and give softness. Seven women employed in collecting waste cotton from wrappings of unpressed bales.

JALGAON—*continued.*

Serial no. of factory.	Notes.
69	*Cotton pressing.*—Employs 70 men, who are paid as in no. 68 above. Conditions of opener and atmosphere were exactly as in that press. The charge for pressing is Re. 1-6-0 *per* bale, of which 4 annas is refunded to the merchant as rebate at the end of the season. No women employed.
70	*Cotton ginning.*—Is under the Factory Act and works with two separate shifts of women—first shift 5 A.M. to 2 P.M., and second shift from 2 P.M. to 10-30 P.M. There are 28 gins. Each shift consists of 28 women, *plus* 8 extra women as temporary reliefs; each woman is allowed 1 hour's interval in the 9. Total 36 women in each shift, or 72 employed each day. Each woman gets 2½ annas a day for 9 hours' work. The 30 adult males work the whole 17½ hours, and earn about 8 annas a day each. Some of the women at work had their babies with them on the gin platforms. The line shaft is in a hollow between brick walls, and is adequately fenced between the drums.
71	*Cotton ginning.*—Has 60 gins, but of these only 33 were at work. For these 33 women *plus* 11 extra hands or 44 women in all, are employed, at 3 annas a day each; the factory runs from 5 A.M. to 8 P.M. and the 44 women are so employed that each does only 11 hours work a day. The men work the full 15 hours after their own desultory fashion, and get 6 annas a day. There is no scarcity of labour, but manager is of opinion that the women's rate of wages would have to be raised if their hours were increased beyond 11. The line shaft is situated and fenced as in the last factory.
72	*Cotton pressing.*—Employs 70 men, who are supplied by contractors, and earn about 10 to 12 annas a day, being paid by the number of bales pressed. The cotton is removed from in front of the opener by men, no women being employed; atmosphere clouded with particles of cotton.
73	*Cotton ginning.*—The first ginning factory in India, started in 1864. Is under the Factory Act, and employs at present 126 women and 38 men; of a total of 100 gins 77 only were at work, and these work from 5 A.M. to 8 P.M. with half an hour's interval at noon; for these 77 gins 77 women are employed, but in order to give each woman only 11 hours of work, 26 reliefs are also employed who relieve the workers as follows—First 26 gins from 8 A.M. to 11-30 A.M., second 26 gins from 11-30 to 3-30 P.M., and remaining gins from 3-30 P.M. to 7 P.M. The relief system was found to be actually in force on the day of the inspection. Besides these 26 reliefs there are also 23 extra women for sweeping, and looking after gins temporarily. Women are paid 3 annas for all hours work; men 5 annas for daylight hours, and 2 annas extra for work before and after dark. Saturday (the local bazar day) is always observed as the weekly holiday instead of Sunday. The charge for ginning is Rs. 4-4-0 *per* 240 lbs. of cleaned cotton, and the cooly contractor provides the whole labour (exclusive of engine and mechanic staff) at 6 annas for the same unit. The local ginning factories all belong to a combine, and pool profits. The line shaft under the ginning platform is fairly well fenced in: this fencing was only done 3 years ago after a woman had been killed while trying to crawl under the shaft.
74	*Cotton spinning and weaving.*—Employs 917 adult males, 173 females, and 139 half-timers—total 1,229. The register for November 1907 gave the following averages—

Daily average number of operatives on the roll	1,319
" " " " present	1,189
" " " " absent	130
" " " substitutes employed	35

This gives an average of 10 *per cent.* absent every day.

Wages average as follows (*per* month)—blow-room and carding Rs. 8, framer Rs. 10, throstle from Rs. 6 to Rs. 12, weaving Rs. 14 to Rs. 15, doffer boys Rs. 6½, reelers (women) Rs. 4, half-timers Rs. 3. Sixty-eight half-timers out of 70 in A set were examined, 6 of them appeared to be under 9 years, though certified over, and 3 of these were physically unfit for work apart from the question of age. One half-timer, who was over 9, was physically unfit. The half-timers seemed generally an underfed, poorly nourished, lot compared with those in Bombay mills. Of the young adults on full-time work 4 seemed to be under 14 years, though certified over. Latrines 29 seats and 10 urinals, not very clean, water-supply and ventilation good. Weighed—

20 male adults of carding and spinning department, average	107 lbs.
62 " " weaving " " "	113 "
Average of 82	111 lbs.

Mill has no electric light and works daylight hours only.

AGRA.

Serial No. of factory.	Notes.
75	*Cotton ginning*—Not under the Factory Act at present. It was originally under the Act, but in 1903 the manager represented that, though the ginning season might extend over 4 months, the factory did not work continuously for 4 months; it was therefore excluded from the operation of the Act Has 51 gins for which 75 women are engaged; women relieve each other from time to time without regular shifts being fixed. No infants allowed inside the factory. Women earn 2½ to 3 annas a day, and men 4 to 5 annas Hours of working depend entirely on the season, the factory being worked all night, when necessary, with two shifts. Fencing of line shaft satisfatory: opener used *before* ginning, and is not dangerous; no women are employed at it. No difficulty in obtaining plenty of hands for double shifts.
76	*Cotton ginning*—Under the Factory Act, though circumstances are identical with those of the last factory. The other remarks on the last factory apply to this factory also.
77	*Cotton pressing only*—Not under the Act, no opener used, and all arrangements unobjectionable.
78	*Cotton spinning*—Employs 511 adult males, 76 females, and 62 half-timers—total 349. Examined 22 half-timers, all appeared to be over 9 years, but 2 of them would have been rejected if certificates of physical fitness had been required. Nine young adults were examined one of them appeared to be under 14 years, and two were unfit for a whole day's work. Weighed 24 male adults, average weight 106½ lbs. Workers all seemed a very healthy lot. Ventilation and fencing good. Latrines 15 seats, 3 urinals.
79	*Cotton spinning*—Employs 578 hands, including 68 women and 44 half-timers. Examined 21 of the latter, all were over 9 years and wore a strong healthy lot: the age test is apparently applied much more strictly here than in the Bombay Presidency. The number of workers loitering about the compound when the members of the Commission arrived was 75, or 15 *per cent.* of those marked present at work (503). Weighed 20 men—average 110 lbs.
80	*Cotton spinning*—Employs 697 hands, including 79 women and 75 half-timers. A new mill with 20,160 spindles. Arrangements for ventilation, fencing, etc., excellent.
	The above three mills, Nos. 78, 79 and 80, are under the same management, and the conditions of work in each being the same, the following remarks apply to all three:—The working hours are from daylight to 9 P. M., with the usual half-hour's interval from 1 P. M. to 1-30 P. M.; the longest hours are from 5-15 A. M. to 9 P. M. in June and July; and the shortest from 6-45 A. M. to 9 P M. in December and January, being 15¼ and 13¾ actual working hours, respectively. These long hours have obtained from the opening of the mills, in the case of one for nearly 20 years. Half-timers work in two sets—(A) from starting time to 1 P.M. and (B) from 1-30 P.M. to 8 P.M., though the children themselves say that (B) set always work on till 9 P.M., and this is confirmed by the adult workers. Half-timers do not carry their age certificates, which are all kept in the office. Women work from starting time to dusk only. The monthly wage for half-timers is Rs. 3, and for full-time boys Rs. 5 Those on piece-work earn on an average as follows—reelers (men and women) Rs. 8 to Rs. 10, cardroom Rs. 8, framer Rs. 12, roving Rs. 11, mules Rs. 25 for winders and Rs. 11 for piecers. As there is no ring spinning, the number of young adults was small. The number of days, excluding holidays, on which a worker absents himself during the month averages from 3 to 4, much the same as in Bombay—the actual number of absentees on the day of inspection being 84 out of 565, or 14 *per cent.* in the first mill; 75 out of 503, or 13 *per cent.* in the second; and 53 out of 644, or 9 *per cent.* in the third. The time spent loitering about in the compound is stated to be much more than in Bombay; to compensate for this, the number of extra hands employed seems to be considerably more than in Bombay, *e.g.*, for one pair of mules of 640 spindles, spinning 10*s*, there are engaged 1 spinner and 6 piecers, against 1 spinner and 4 piecers in Bombay. The managers and European supervisors all leave work at 5 P.M., so that from 5 P.M. till 9 P.M. work is carried on under the supervision of the jobbers only; and it is admitted that between 5 and 9 P.M. the rate of production is considerably lower and the waste greater. Quarters have been built for a number of the mill workers—500 rooms, at a monthly rent of 6 annas a room—and more are under construction.

ALIGARH—HATHRAS—CAWNPORE.

Serial no. of factory.	Notes.
	ALIGARH.
81	*Cotton ginning.*—The factory has 45 gins (double) for which 45 women, *plus* 12 spare, or 57 in all, are employed. The factory works as a rule from 8 A.M. to 8 P.M. with an hour's interval at noon; but in a busy year it works for 24 hours a day with two shifts of 12 hours each, and occasionally as much as 16 hours with one shift only. The hands are supplied by a contractor, who keeps no attendance register, but gives each worker a check every day. The workers are paid at the end of the week. No attendance register has hitherto been kept by the mill manager, only the total number of workers present daily being entered in the books. It is therefore impossible to ascertain whether the law as regards hours of work for women is complied with. Fencing of machinery sufficient except at one place. Usual wage in ginning factories in Aligarh is 3 annas for a woman, and 4 to 5 annas for a man. Labour is plentiful.
82	*Cotton ginning.*—The factory has 52 gins, which were worked last year either by double sets for 24 hours, or by single sets up to 14 hours. The manager admits that in previous years he has engaged only one woman *per* gin, without any spare hands, when working by single shift; so that the law as to the hours of employment of women must have been transgressed. Fencing of machinery adequate.
	HATHRAS.
83	*Cotton ginning and pressing.*—There are 2 separate ginning factories, of 50 and 36 gins respectively, which work fairly regularly from 6 A.M. to 8 P.M. with half an hour's interval at noon. Last year, for the 50 gins 50 hands, *plus* 4 spare hands, or 54 in all, were employed; and for the 36 gins, 36 *plus* 3 spare hands. This gives the women more than 11 hours a day; and the law has apparently been transgressed in this respect. Regular attendance rolls are kept here, and the hands are paid direct, not through a contractor. The opener is fitted with a lattice delivery, which prevents any chance of accident from stones.
84	*Cotton spinning.*—The mill has 20,800 spindles, of which 8,200 are ring and 12,600 mule; it employs 502 adult males, 58 women and 185 half-timers, or a total of 745 hands. By the courtesy of the manager, the mill was stopped for an hour, and all the hands (male) were mustered outside for inspection. The physical condition of all was very good, the half-timers being an exceptionally fine healthy lot. Of the 372 adult males (excluding mechanics, etc.) 72, or about 19 *per cent.*, were between the ages of 14 and 17. All the 104 half-timers examined seemed to be over 9, and all were physically fit. Weighed 30 full grown men, average 106 lbs. The working hours are always from dawn till 8 P.M. The operatives asked some time ago for a reduction to 7 P.M. in the summer months, as they got exhausted by the great heat, but the request was not granted. The manager, who had some years' experience in a Bombay mill, stated that the operatives are not so good as the Bombay mill-workers, and that 9 men were required to do what 7 or 8 men would do in Bombay. For a pair of mules of 750 spindles each—which would require 7 men in Bombay—9 men are employed here, and as a rule not more than 5 of these 9 would be found present at their mules at any one time. There is much loitering about in the compound, and the manager estimated that the men do not do more than 10 hours' actual work a day. Monthly wages are as follows:—half-timer doffers Rs. 2-8-0, others Rs. 3; when boys become full-timers they get Rs. 5, and when fit for piecing (after one to three months) they get Rs. 7. Reelers (mostly men here) earn Rs. 10 to Rs. 14 a month, working till 8 P.M. like the rest of the hands. During the ginning season, the half-timers are said to work for the other half of the day in the ginning factories. A school was started for the half-timers about 2 years ago, but it had to be closed after 3 months for want of pupils. Fencing of machinery sufficient and ventilation good. Some houses are being built by the proprietors for the mill-workers; they have superior rooms 12′ × 10′, costing Rs. 500 each, and others measuring 9′ × 10′ costing Rs. 250.
	CAWNPORE.
85	*Cotton spinning and weaving.*—The mill employs in the spinning department 1,242 adult males, 409 half-timers, and 145 females; in the weaving department there are 636 adult males. It works daylight hours only, from April to October, and with electric light from October to April, up to about 8 P.M.—that is, an average of about 13 or 13½ hours daily. 150 half-timers were examined; 35 of them seemed to be under 9 years, and many would have been rejected as physically unfit, if certificates of physical fitness were necessary, chiefly on account of spleen. Almost all the half-timers examined stated that they were actually employed for full time. The manager has recently abandoned the practice of having half-timers certified for age by the Civil Surgeon, and employs them at his own risk. There is a large number of young full-timers in the spinning department, and the department evidently could not be run

CAWNPORE—*continued.*

Serial no. of factory.	Notes.
85—*contd.*	without this class of workers. In one factory building 73 young full-timers were counted, and of these a number seemed, without close examination, to be under 14. Weighed 10 adults in spinning department—average 103 lbs., and 26 weavers—average 108 lbs. The average monthly earnings are as follows :—Weaver on two looms Rs. 16. mule spinner Rs. 25, piecer Rs. 14, full-timers on ring frames Rs. 6-8-0, half-timers Rs. 3-4-0. The manager is of opinion that there has been a great improvement in skill and application of the operatives during the last 20 years, but they are still much behind the Bombay mill hand. A system of passes permitting the workers to go outside for eating. etc., is in force—12 passes *per* 100 hands being issued. This represents 1½ hours' absence *per* man in the 13 hours. Fencing of machinery, ventilation, and latrines quite satisfactory.
86	*Woollen mill.*—The mill employs 1,600 adult males and 215 females. There are no half-timers. The average daily working hours are 10 hours 20 minutes, and the actual hours worked vary from 11¾ hours to 9½ hours. The midday interval is one hour, except from May till August, when 2 hours are given. An accurate system of checking temporary absences from the work rooms is in force, with the result that an average workman probably does not leave his work during working hours for more than half an hour a day. Overtime up to 9-30 P.M. was worked in the tailoring department (engine not running) for 74 days in 1905, 74 days in 1906, and 55 days in 1907, always in order to comply with urgent orders. About 220 of the hands, *i.e.*, 14 *per cent.*, are between the ages of 14 and 16. Women are employed in sorting wool, and earn 3 annas a day; some had their infants with them in the wool-sorting room. Examined 26 of the youngest looking workers; all were over 14 years, except one who, though certified over 14 years, was apparently under that age. The mill gets the Civil Surgeon to certify all doubtful cases of children about 14 years Weighed 28 adults, average 106½ lbs. Latrines 42 seats. Sanitation, ventilation and fencing excellent. Sundays are invariably given as holidays, and on an average 4 other holidays also a year. The Company has provided a settlement containing 452 houses let at nominal rents, which accommodate about one-third of the operatives
87	*Flour mill.*—The mill employs 111 men and 4 women. There are no half-timers. It works day and night by double shifts, the day-shift men changing to the night shift after the Sunday holiday. The usual Sunday holiday is given, the mill stopping at 6 A.M. on Sunday, and the workmen being kept till noon to clean machinery.
88	*Jute spinning and weaving* —The mill employs at present only 156 adult males and 27 half-timers. It works by daylight only. All the half-timers actually work full-time, and earn about Rs. 3-4-0 a month. Examined 23 half-timers, of these 4 appeared to be under 9 years, and 8 had not been certified; they were a fair lot physically. Some of the certificates signed by the Civil Surgeon were not dated.
89	*Cotton spinning and weaving, &c.*—The mill employs 2,089 adult males, 108 women and 168 half-timers, or a total of 2,365 hands. The actual hours of work average about 13 throughout the year. The mill works by daylight only in the hot weather, and with the aid of electric light in the cold weather. Until recently, half-timers were not sent to the Civil surgeon to be certified, the manager employing them as half-timers or full-timers on his own responsibility; but this system has now been abandoned, and half-timers are examined by the surgeon. A number of very young boys were noticed at full-time work, but there was not time to examine them. There are buildings inside the factory premises in which tent-making and weaving are carried on solely by hand labour. Fencing, ventilation, and sanitation excellent. Weighed 21 adult workers, average 106 lbs.
90	*Leather factory.*—The factory employs 2,750 adult males, 36 females and 218 half-timers. The work is chiefly hand work. The actual working hours are about 10½ in winter and 11 in summer, but overtime is worked on occasions to fulfil Government contracts in time of war. Half-timers are not employed in shifts, but are all supposed to come at 8 A.M., and leave at 3-30 P.M.; as a matter of fact, most, if not all, of them work full-time both here and in the other factories at Cawnpore. Arrangements for ventilation and sanitation are excellent; a very suitable type of urinal has been adopted here. The Company has built a settlement of 900 houses for its operatives.
91	*Leather factory.*—Employs 620 adult males and 72 half-timers. The remarks as to hours of work and half-timers in No. 90 apply here generally.
92	*Cotton spinning and weaving, &c.*—The factory employs 1,636 adult males, 76 females and 160 half-timers. The working hours average about 12 a day. The management, after trying a longer day some years ago, found a 12 hours day the most economical arrangement. Thirty half-timers were examined; all were above 9 years, and all

CAWNPORE—LUCKNOW.

Serial no. of factory.	Notes.
92—*contd.*	admitted that they worked full-time. They, and the other boys noticed in the mill, were a poor lot physically. Weighed 70 adult weavers, average 111 lbs. Arrangements for ventilation and sanitation excellent.
93	*Cotton ginning and pressing.*—The factory employs 100 men and 65 women; it works in a busy season day and night, with separate day and night shifts, working 12 hours each. Women tend the gins in the night shift, and the manager states that it would be impossible to get men to do the work. Line shaft is fenced in with moveable wooden covers.
94	*Oil pressing and cotton ginning.*—The oil mill works day and night, the first shift of men working from 6 A.M. to noon, and again from 6 P.M. to midnight; and the second shift from 12-30 P.M. to 6 P.M. and from midnight to 6 A.M. The machinery is insufficiently fenced. The line shaft in the ginning factory is separated from the seed-collecting alley by a wire fence only.
95	*Government harness and saddlery factory.*—The factory employs 2,421 male adults and 59 half-timers. It works 8 hours a day (6 hours on Saturdays) or 46 hours a week, throughout the year Besides Sundays, 25 holidays are given in the year. Almost all the work is either piece or contract work, and an average workman is not absent from his work for more than 20 to 30 minutes a day. The men could well work longer hours, and most of them are said to do private work at home after leaving the factory. The half-timers are all in the pay of the contract-workers and most of them work full-time. Piece work rates are calculated so as to give an average workman 6½ annas for a fair day's work.
96	*Cotton spinning and weaving.*—The mill employs 2,358 adult males, 175 females and 163 half-timers. Examined 125 half-timers, of these 10 appeared to be under 9 years, though certified over that age, and 4 were uncertified, though they had been working for 3 months. They were generally a poor lot, with much eye and skin disease. The manager admitted that, as elsewhere in Cawnpore, they all worked full-time. There is a school on the premises where the boys are supposed to be taught English by a master who does not know that language; the master states that all the half-timers go into the mill in the morning, he then goes and begs the over-lookers to give him a few boys to teach, and generally succeeds in getting about a dozen. All hands are made to come on Sundays for about 2 hours to clean machinery. Weighed 24 men in the spinning department—average 109½ lbs., and 42 weavers—average 108½ lbs. Until July 1906 this mill worked not less than 13 hours a day; from August 1906 to February 1907 the hours were 12½, and since then the mill has always worked 12 hours only. The manager states that the actual production in the 12 hours day is as much or more than it was in the 13 hours day, and gives the following figures for 5 pairs of mules, selected as those on which the attendance of spinners was most regular :—

Mule No.	Production.		Wages earned.			
			May 1906.		May 1907.	
	May 1906 (13 hours) average 20s in lbs.	May 1907 (12 hours) average 20s in lbs.	Spinner.	Piecers 5.	Spinner.	Piecers 5.
			Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
21 and 22 ...	7,102	8,201	14 3 0	35 7 0	16 6 0	40 15 0
23 and 24 ..	8,786	8,194	17 8 0	43 12 0	16 6 0	40 15 0
25 and 26 ..	7,593	8,096	15 3 0	37 15 0	16 3 0	40 7 0
33 and 34 ...	10,437	12,190	20 14 0	52 3 0	24 6 0	60 15 0
34 and 35 ...	10,024	10,732	20 0 0	50 0 0	21 7 0	53 11 0
Total ...	43,942	47,413	87 12 0	219 5 0	94 12 0	236 15 0

The manager considers that the 12 hours day is more economical, and is liked better by the operatives than a longer day. Weaving is done only by daylight, there being no electric light in the weaving shed. Of the weavers 286 men tend 2 looms each, and 360 one loom each. There are a number of young boys, from 14 to 16 years of age, employed on weaving here.

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97 *Paper mill.*—The mill employs 564 male adults and 84 half-timers. There are no women. It works day and night with double shifts of 12 hours each, changing at 6 A.M. and 6 P.M. The mill stops at 6 P.M. on Saturdays and starts again at 6 A.M. on Monday; all hands come to clean machinery from 7 A.M. to 11 A.M. on Sundays, any work after

LUCKNOW—CALCUTTA.

Serial no. of factory.	Notes.
97—*contd.*	11 A. M. being paid for as overtime. Workers are allowed an interval of one hour at noon, but the engine continues running, and any men who choose to work during the interval are paid for one hour's overtime. Overtime is paid for at the rate of 8 hours work counting as a complete day. The daily number of absentees is large, averaging from 70 to 80; and to fill these temporary vacancies 40 "reserve" coolies are entertained. Occasionally a man of the day shift has to work for an absentee of the night shift; in such a case he works for 3 consecutive shifts of 12 hours each, but is allowed 3 hours' rest between each change, *i.e.*, six hours in all. The hands recently applied for a reduction of hours, but it was not granted. Examined 31 half-timers employed in the rag-dusting department; all were over 9 years, and were a strong lot. Certification has apparently been carefully done. Half-timers work only by day, and apparently do a full day's work, and there is no system of half-time shifts. Examined 20 young persons; all seemed to be over 14 years, and were a good lot physically.
98	*Printing press.*—The press employs 361 adult males and 29 half-timers. The hours for machine printing are 6 A. M. to 6 P. M. in summer, and 7 A. M. to 7 P M. in winter. The hand-presses work by day-light only as a rule. The half-timers in the hand-press department are stated to come to work not before 9 A. M.; they certainly do not leave before dark, and they work much more than the legal hours, there being no system of half-time shifts. They are a healthy-looking lot.
99	*Cotton spinning.*—The mill has 5,000 spindles, and employs 175 men, 8 women, and 49 half-timers, of whom 15 have not been certified by the Civil Surgeon though they have been at work for about 2 months. The working hours are from 6-45 A.M. to 9 P. M., with the midday interval of half an hour. There is no system of half-time shifts, all the half-timers doing the full days work of 13¾ hours. The proprietor admits that this is the practice, and pleads scarcity of labour. Examined 39 half-timers; 9 of them appeared to be under 9 years, and 3 of them were probably not over 7 years, being very small and unfit for any work. The children as a whole were a poor, weakly lot.
100	*Iron works*—The works employ 244 men and 21 half-timers. The hours of work are from 7 A.M. to 5 P.M., with one hour's interval at noon; but overtime is worked, mostly by blacksmith and fitters, up to 9 P.M. for 90 days, on an average, in a year. In December 1907 overtime was worked on 15 days to comply with an urgent order for famine relief work tools. Overtime is paid for at the rate of 8 hours counting as a full day. Half-timers are supposed to work only from 8 A.M to 4 P.M., but this restriction of hours is not strictly observed in practice.
101	*Flour mills, &c.*—The mill employs 115 adult males. There are no women or half-timers. It works only day-light hours, except occasionally when light work is carried on by a separate shift to supply urgent demands.

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102	*Jute spinning and weaving.*—The mill employs 2,482 adult males, 385 women and 376 half-timers:—total 3,243. Hours of work are always from 5 A.M. to 8 P.M., and there is no stoppage of the engine for a midday interval. In the batching, preparing, and spinning, the adult males work by relays as follows:— First set from 5 to 9 A.M and 12 to 8 P.M., Second set from 9 A M. to 8 P M., Third set from 5 A M. to 3 P.M., Fourth set from 5 to 12 noon and 3 to 8 P.M. These sets have no half-hour intervals at any fixed times, but go out for the purpose of drinking, etc., as they like. The half-timers work in two shifts, the first from 5 to 9 A.M. and 12 to 3 P. M., the second from 9 to 12 noon and 3 to 8 P.M.; no half-hour interval is given at any fixed times to these shifts, but they are allowed to go out as convenient The weavers work from 5 A M. to 8 P.M, with an interval of one hour between 8 A.M. and 12 noon, and half an hour between 4 and 6 P M.; these intervals are taken by mutual arrangement among each set of four weavers. In the winding deparment the hands, chiefly women, apparently work somewhat irregular hours, but it is admitted that some come at 5 A.M. and do not go till 8 P.M., taking an interval of 2 hours or more during the day. Examined 97 half-timers; 17 of these appeared to be under 9 years; they were a poor lot physically, and some were very thin. The practice is to have the half-timers certified by the certifying surgeon at the mill, but no certificates had been granted since the 5th March 1907, *i.e.*, for 10 months, and many of these half-timers, including the 17 under

CALCUTTA—*continued.*

Serial no. of factory.	Note.
102—*contd.*	9, were uncertified. Weighed 24 men in batching department average 103 lbs. 11 „ „ spinning „ „ 99½ „ 12 „ „ weaving „ „ 115 „ 47 105 In the spinning department a large number of boys apparently under 14 years are working full-time, and a number of young adults just over 14 were also observed. Wages are paid weekly; the half-timers get Re 1-2-9, full-timers Rs. 2-5-0 to Rs. 2-9-0 a week, and on piece-work winders earn Rs. 3 and weavers up to Rs. 6 a week. Latrines 29 seats and 2 urinals. Rope alley way fencing deficient. Some dwellings for workers have been built outside the mill, the rent charged is 4 annas *per* week for a room.
103	*Jute spinning and weaving*—The mill works from 5 A.M. to 8 P.M. by shifts; all the workers know their timings, the shift system is undoubtedly in practical operation, and the fixed hours are adhered to. No male adult works for longer than 11 hours a day. The half-timers work in two shifts. A shift from 5 A.M. to 8-30 A.M., and again from 12 noon to 3-30 P.M.,—B shift from 8-30 A.M. to noon, and again from 3-30 P.M. to 8 P.M. These hours have been arranged so as to fit in with the adult working hours, though the result is that one shift works for eight hours, and the other for seven hours only. Out of 120 half-timers working in the mill at the time of the Commission's visit, 73 were produced. Of these 12 were under 9 years of age. The half-timers were a poor lot. The certifying surgeon comes, on an average, four times in the year to the mill to inspect the children. Sixty-seven children, working in the mill, were awaiting inspection at the time of the Commission's visit, the doctor being due on the next day. Of 10 young adults selected for examination, 2 seemed under 14 years of age. They were all of poor physique. Half-timers are not presented again for medical examination before being taken on as full-timers; their age is calculated from the original certificates. The manager states that the production in the 15 hours day is less in the spinning and preparing departments than in a 10 hours day in Dundee; he has had a long experience in both places. The weavers are all piece workers, working unrestrictedly as regards hours while the mill runs. They must turn out a reasonable amount of work from their looms, however; but the limit is a low one. Their average production is about 60 *per cent.* of the possible production, as compared with about 80 *per cent.* in Dundee. The majority of the weavers clean their looms on Sundays, though they could easily clean them on Saturday night. Coolies are employed to clean the machinery in the spinning and preparing departments on Sundays. The women's hours are the same as those of the men working in the same shifts. Ventilation and fencing good. The three mills employ 5,671 men, 1,611 women, and 1,146 children—total 8,428. For daily wage men, time after 7 P.M. is paid for as overtime, at the ordinary daily rate. Wages are paid weekly. All the hands live close to the mills; and there have been no labour difficulties except in the very hot months of the year. The mills do not provide houses for the operatives. 20 men were weighed—the average was 108 lbs.
103	*Jute pressing*—The press employs about 60 permanent hands, the other hands are temporary coolies engaged by the mill or the balers All are full-grown men. Working hours are usually from 6 A.M. to 6 P.M., sometimes in the busy season till 8 P.M. Some of the men working the presses earn up to Rs. 1-8-0 a day; they are paid by the number of bales pressed, and are so quick at the work that each bale is pressed and lashed in from 60 to 90 seconds. Many of the workers are *uriyas*, they work for 6 months in the year, and then return to their country to cultivate their lands The work is so heavy that they cannot stand more than 6 months of it at a time, and when working they do not as a rule work more than 20 days a month In a working day of 12 hours each man does 8 hours' *actual* work, 15 men being provided for one press requiring 10 hands to work it. Sunday working is permitted by special notification under the Act.
104	*Jute spinning and pressing*—The mill employs about 4,000 hands, including 650 women and 700 half-timers The hours are from 5 A.M. to 8 P.M for the spinning department (by electric light), and from 4-40 A.M. to 8 P.M for weavers, who relieve each other for intervals of rest, one "daily" weaver paid by the mill being provided for each set of 7 looms. The Commission noticed a large number of children under 9 working as half-timers, probably from 40 to 50 *per cent.* of the total number of half-timers Some of them were only about 3 feet high and obviously not over 6 years of age. Photographs were taken of some of them. The manager was obliged to admit that the law prohibiting the employment of children under 9 years as half-timers, and of children under 14 years as full-timers, was not observed. The mill used previously to get the Government certifying surgeon to examine children for age, but it abandoned this practice, and the manager states that children are now examined for age by the Company's doctor only. He admits that a strict enforcement of the law as regards child labour would affect the supply of labour considerably Weighed 20 adult workers, average 110½ lbs.

CALCUTTA—*continued.*

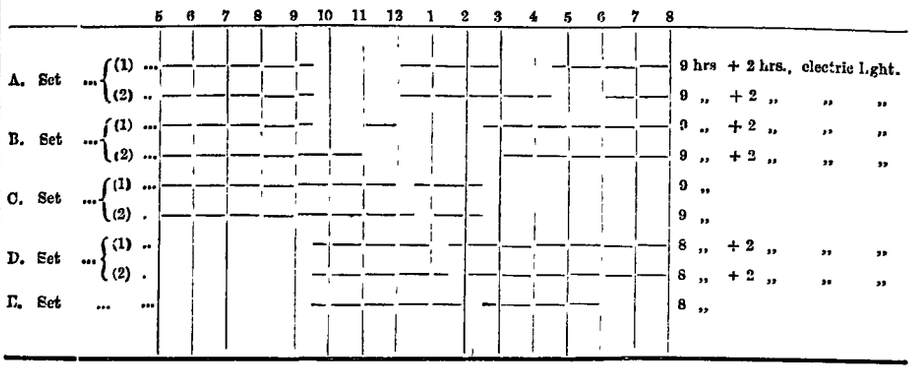
Serial no. of factory.	Notes.
105	*Jute spinning and weaving.*—The mill employs about 3,000 hands, including 600 women and 350 half-timers. It works by day-light only, for about 11¾ hours at present (end of January); the longest day is 14 hours from 5 A.M. to 7 P.M. There is no general stoppage of work at midday. In the spinning department the adults work in shifts, no one doing more than 9 hours a day. The weavers are at work nominally for the whole day, but they arrange periods of rest among themselves Half-timers work in two shifts—the first from 6 A.M. to 9 A.M. and 12 to 3 P.M. and the second from 9 to 12 noon, and from 3 to 6 P.M. The Commission noticed a very large number of children under 9 (some not more than 6 years old) working as half-timers, and the manager admitted that in this respect the law was not enforced. It was likewise noticed by the Commission, and admitted by the manager, that a number of children under 14 were working as full-timers. The manager urged that in the event of the law as to child labour being strictly enforced, sufficient previous working should be given to mills to enable them to put their "houses in order"; he said that when the age of half-timers was raised by the Act of 1891 from 7—12 years to 9—14 years, an endeavour was made at first to enforce the regulation, but this was soon abandoned, and children are now employed exactly as they were when the legal age was 7—12. He thinks that 10 hours a day is as much as a young boy of 14—16 years can work, and that there should be a reduction in the 9-year limit for half-timers, it being prescribed that they should not work before 6 A.M. nor after 6 P.M. This mill adjoins a mill which works from 5 A.M. to 8 P.M, and no difficulty is experienced in getting hands to work the shorter hours, though their earnings may not be so large. A weaver earns up to Rs. 5-4 0 a week, against a maximum of Rs. 6 in the adjoining mill. Ventilation and fencing good. Latrine on septic tank system—40 seats. The mill has built 460 rooms accommodating at present 1,100 workers, for which a monthly rent of 12 annas each room in charged.
106	*Paper mill.*—The mill employs about 1,050 hands, including 170 women and 80 children. It works day and night, stopping only from midnight on Saturday to midnight on Sunday, the shifts changing at 6 A.M. and 6 P.M. The day shift gets 2 hours off for meals at different hours. The half-timers are stated to work intermittently for 9 or 10 hours, and are not divided into regular shifts; the law restricting their hours to 7 is apparently not enforced. Women are employed chiefly on the picking and sorting of grass. Men earn 5 to 8 annas, and women 3½ to 4 annas, a day General arrangement was good, except that the fencing of machinery had not been properly carried out.
107	*Jute spinning and weaving.*—The mill employs about 11,641 hands. The working hours are as follows:— (i) In the preparing and spinning department, from 5 A. M. to 8 P. M., the hands working in shifts so that no worker does over 10 or 11 hours; (ii) in the weaving department from 4 A. M. to 8-30 P. M., and sometimes to 9 P. M. on Saturday, without shifts; but the weavers each get one hour off between 7 and 11 A. M., and another hour between 1 and 5 P. M. (the men on every four looms forming a set to relieve each other) besides shorter unregulated periods aggregating one hour a day for going to latrine, drinking, etc., leaving the hours *actually* worked at about 13½. The half-timers are in two shifts:— (*a*) from 5 to 9 A. M., and from 12 to 4 P. M.—total 8 hours; (*b*) from 9 to 12 noon, and from 4 to 8 P. M.—total 7 hours. Each half-timer works three days in (*a*) shift and three days in (*b*) shift every week. No stated intervals of rest are given as required by the Act, and there is no explanation of the eight hours employment of half-timers, except that the actual hours of working are much reduced by idling. A large number of half-timers are never presented to the certifying surgeon for examination. The register showed that out of 159 recently employed only 25 have been passed by the certifying surgeon. The Commission noticed a large number of very small children, from six to eight years of age, at work. The manager admitted that a very large number of boys under 14 years of age are employed as full-timers. The application of the shift system with its shorter hours *per* worker to the spinners is explained by the fact that most of the work is done by young boys who could not possibly stand longer hours, the work in spinning jute being much heavier than in spinning cotton, on account of the more frequent doffing, and because everything is heavier. On the other hand the weavers are all full grown adults, who are apparently ready to work at very high pressure for 5 or 6 months, so that they can then take leave on their large savings. The men themselves say that they could not stand the long hours without taking frequent spells of leave, for at least three months a year. The weekly cleaning of machinery is done on Sunday by a number of the hands (about one-third of the full complement in the spinning

CALCUTTA—*continued.*

Serial no. of factory.	Notes.
107—*contd.*	department) who come of their own accord, and get extra pay for the work. Arrangements for ventilation, sanitation and fencing are perfect. Weighed 30 adult males, average 109 lbs.
108	*Flour mill.*—The mill employs 218 adult males only; it works ordinarily both day and night, the day shift working from 6 A. M. to 8 P. M, with a two-hour interval of rest for each man, and the night shift from 8 P. M. to 6 A. M., without intervals. The two hours from 6 to 8 P. M., in excess of 12 hours, are paid for as overtime. A man earns from Rs. 11 to Rs. 14 a month. Very occasionally, one or two of the day hands are called on to take the night work of absentees; in such cases two men work 5 hours each. Special attention seems to be paid to cleanliness and sanitation.
109	*Iron works.*—The works employ nearly 4 000 hands, including 130 half-timers. The working hours are from 8 to 12-30 P. M., and from 1 to 5 P. M.—8½ hours daily: Overtime is worked at night only for emergency work, on an average only for one or two nights a month, and then only in particular departments. The half-timers are not paid directly by the Company, but are in the employment of the *mistris* who do work by contract, they are as a rule young lads brought to learn the work. Though none under 9 years was observed, 96 had apparently not been certified by the certifying surgeon.
110	*Cotton spinning*—The mill employs at present 895 men, 56 women, and 221 half-timers. It works only a 10-hours day (8 A. M. to 6 P M. at present.), without shifts. The manager states that the mill hands here will not work more than 10 hours a day, that he tried to get them to work 10½ hours some years ago, but there was no more production, and the hands had apparently decided against longer hours, so he went back to the 10 hours day. The Bengali millhand must get his hour and a half or two hours some time in the day for cooking, etc., most of them will not eat food brought cooked to the mill, hence the shorter hours both here and also under the shift system. For going out to drink, visiting the latrines, etc., during work hours, a maximum of 3 periods of 20 minutes each is allowed to each person (this is controlled by a system of passes) but this is generally not given in full. There is close European supervision over each department. The half-timers are stated to be employed as follows:— A Set ... (1) 8—11 A. M., and 12—4 P. M. (2) 8—12 noon, and 1—4 P. M. B Set ... (1) 10—1 P M., and 2—6 P. M. (2) 10—2 P. M., and 3—6 P. M. Examined 19 half-timers, all had been certified for age, but 5 appeared to the Commission to be under 9 years, though the certifying surgeon who was present believed that with one exception they were over 9 years. The wages of adults are paid monthly, those of half-timers weekly. The mill operatives as a class seem to prefer work in a jute mill to that in a cotton mill.
111	*Jute spinning and weaving.*—The mill employs nearly 7,000 workers, of whom about 8 *per cent.* only are half-timers The working hours are from 5 A M. to 8 P. M., the adults in preparing and spinning departments working by shifts arranged so that no one works more than 10 hours a day. There is no midday interval. The system of shifts in force look rather complicated when reduced to writing, but the Commission satisfied themselves that it is actually carried out in practice, every workman questioned by them knew exactly the hours he had to work The workers are split up into small gangs under *sirdars* who see that the reliefs are carried out; and the hands themselves see that they are not kept at work longer than their fixed hours. Both here and in all other jute mills in Calcutta wages are paid weekly on Saturday for the previous week. A bonus of one anna a day is given to every man who has put in a full attendance for the week, and the manager states that about 90 *per cent.* of the hands earn this bonus The workers take, on an average, one month's leave in every six. The certification of half-timers is not properly carried out, it is admitted that about 25 *per cent.* of the half-timers are under 9 years and have not been put up for examination by the certifying surgeon because it was thought improbable that he would pass them. The Commission observed large number of very small boys at work, and actually picked out 13 half-timers who were certainly under 9 years. One of them was not more than 6 years. They were a poor, weedy lot. Thirty boys, who were obviously under 14 yesrs, were also noticed working as full-timers. The children are certified for age by a local native doctor in the employ of this and an adjacent mill. It was stated to the Commission that this arrangement was made with the sanction of the Government. The factory inspector had not visited the mill for 9 months. Ventilation, sanitation and fencing of machinery good. About 1,800 well-built houses have been provided by the mill for the workers, with shops, schools and a post office; the settlement is excellently arranged, and is stated to give a return of 7 *per cent.* on the outlay. Weighed 15 adult workers, average 111 lbs.

CALCUTTA—*continued.*

Serial no. of factory.	Notes.
112	*Jute spinning and weaving.*—The mill employs about 5,500 hands, including about 700 half-timers The working hours are from 5 A M. to 8 P.M , the adults in the preparing and spinning departments working by shifts as follows:—



The system appears complicated on paper, but is apparently actually worked up to, the *sirdars* or headmen in charge of gangs of from 15 to 50 hands arranging the reliefs so as to suit the convenience and wishes of the workers. All the workers questioned by the Commission knew the exact hours at which they were expected to begin and leave off work. The system is specially suited to the natives of Bengal, few of whom will eat food brought cooked to the mill. They must have a sufficient interval either before or during working hours to cook, eat, and bathe, at their houses. Work at night by electric light is paid for extra. The manager estimates that hands do not take more than 20 minutes each a day, during their actual hours of work, outside the building for drinking, etc. For this 5 *per cent.* extra hands are entertained. These restricted working hours have been in force in the jute trade from the first, and the system is thoroughly understood and apparently liked by the workers. The half-timer shifts are arranged as follows.—A shift from 5 to 9 A M. and from 4 30 to 8 P.M.; B shift from 9 to 4-30. The half-timers are said to get half-an-hour's interval of rest at odd times. Weavers, beamers, winders and sewers are paid by the piece, and their hours are not restricted; but they do not in practice work over 12 hours each. In the weaving department the men on every 4 narrow looms form a separate set and arrange among themselves when one of their number goes out; in the case of broad looms 5 men are engaged for every 4 looms, the fifth man being usually a learner or in waiting for a loom of his own, and being paid a weekly wage of from Rs. 2-8-0 to Rs. 3-0-0 by the mill. A good weaver earns from Rs. 5 to Rs. 6 a week. Beamers, too, work in sets of 4, one extra—a fifth relief—man being given by the mill. Winders are paid by the number of bobbins taken off and handed in by each person, 30 *per cent.* more hands than the machines require being entertained to provide for temporary reliefs and absences from work. In the hand-sewing of sacks there is no attempt to restrict the hours even of the women and children, whole families come, men, women and children, and sit down to work, coming and going as they please. The cleaning of machinery is done on Saturday night; on Sunday only men for repairing machinery are called, and a special gang of coolies to sweep up. On the Sunday previous to the inspection only 83 men, including mechanics, worked. The certifying of half-timers is not properly seen to; and it is admitted that many children believed to be under 9 years are not brought before the certifying surgeon for examination. A large number of such children were observed by the Commission The certifying surgeon had not visited the mill for 7 months. He is only paid 4 annas a child passed by him, and no fee is paid for a child examined and not passed. It was further noticed that many children obviously under 14 were employed on full time. There is no midday stoppage of the mill here, or in any of the jute mills in Calcutta, even though the weaving department is not worked by shifts. The reason given is that a half hour stoppage would reduce production to a much greater extent than the actual time would indicate, on account of the delay in getting all hands to work again. A number of infants and non-working children were seen inside the mill. Fencing and ventilation were excellent. Latrines, 90 seats on septic tank system, were clean.

113 *Soap factory.*—It employs 116 men and 105 half-timers. The working hours are from 8 A.M. to 5 P.M., with half an hour's interval from 1 to 1-30 P.M The half-timers do not work by shifts, but all work the full hours of the factory, *viz* 8½ hours, in spite of the law restricting their work to 7 hours. They are employed on light work, *e.g.* box-making, and look a bright, healthy lot of boys. A very clean, well arranged factory.

CALCUTTA—*continued.*

Serial no. of factory.	Notes.
114	*Cotton spinning and weaving.*—The mill employs 1,958 adult males, 238 women and 242 half-timers—total 2,438 hands The working hours are from 7-30 A.M to 7-30 P M. in the spinning department and from 6 A.M to 7-30 P.M. (6-30 A.M. to 6 P.M. in a recent addition which has no electric light) in the weaving department. There is only one engine to drive both departments, and it is found possible to work one department when the other is not at work. Though no regular shift system is in force, there is no midday interval given in the spinning department, as required by law. Nor are the half-timers arranged in shifts—they all come at 7-30 A.M. and leave at 7-30 P.M. The manager says that the number of hands employed is sufficient to allow each of the boys at least two hours away from the mill, and that the clerks or *sirdars* arrange the time for letting each boy go. The boys say they get only one hour to go home for food, and that they work the same hours as the men. In either case, whether the hours are 10 or 11, the law restricting half-timers to 7 hours of work is infringed. The boys looked a bright, healthy lot; but many of them were obviously under 9 years. The certifying surgeon had not been to the mill or certified any children for 7 months. The so-called 'half-timers' got from Rs. 3-4-0 to Rs 4-8-0 a month, 'full-time' boys from Rs. 5 to Rs. 7-8-0; weavers earn on an average Rs. 17 a month, though a few earn as much as Rs. 30. Women are chiefly on the drawing frames; they work the same hours as the men. No notice stating the times of the intervals of rest for women and children is exhibited, as required by law. Sunday is given as the weekly holiday, except on two days in the year, when an Indian holiday is observed instead in addition, the mill is closed on 6 other Indian holidays. No scarcity of hands has ever been experienced here, and it is stated that the work is more popular than that in a cotton mill. The Bengali seems to make an indifferent weaver; with the exception of two or three hands all the weavers are upcountry men from Cawnpore, etc. For each pair of mules with 1,420 spindles only one spinner, two piecers and one reeler are engaged. The Kestner system of humidifying and ventilating has been introduced, and seems very efficient. Weighed 20 weavers, average 112 lbs.
115	*Jute spinning and weaving.*—The mill employs about 6,000 hands. The machinery is driven by electricity generated on the premises. The arrangements throughout the mill are excellent, but the usual number of undergo half-timers were observed.
116	*Cotton spinning.*— The mill has 34,000 spindles, and employs about 500 adult males, 25 women and 120 half-timers. The working hours are from daylight to dark, without shifts, but the manager states that extra hands are employed so that the workers are relieved at different hours arranged by the headmen to take their food, etc., Nominally the half-timers are divided into 3 shifts, but inquiry showed that in practice most, if not all, of them work the same hours as the full-timers, coming in the morning and going at night, and getting irregular intervals of rest during working hours. There is no stoppage of the mill for half an hour at noon, as required by the Act. The workers, men and boys, seemed to be a weaklier lot than in the adjacent jute mills. The special factory inspector had not been to the mill for 18 months.
117	*Chemical works.*—The works employ about 100 hands, all adult males except 4 or 5 youths between 14 and 16 years; there are none below 14 years. The working hours are from 6 A.M. to 5 P.M. with an interval of rest from 12 noon to 2 P.M. Acids are the chief article manufactured. Any continuous processes are worked by shifts of 8 men, relieved at fixed hours—those who have to do night duty going off day duty at 2 P M and returning to work from 10 P M. to 6 A M., so that no man has night duty oftener than once in 3 days. The men like the work, and do not change about much. A new-comer commences on Rs. 8 a month, and rises to Rs. 15, a rice allowance of Rs. 1½ being given to each man. Any work after 5 P.M. is treated as overtime.
118	*Cotton spinning.*—The mill employs about 2,000 hands. The working hours at present are from 8 A.M to 8-30 P.M. Here as in other Calcutta cotton mills visited— (i) the half-timers do not really work in shifts, but with few exceptions work the full hours of the mill, each getting an hour or so at different times arranged by the headmen to take their food, and (ii) there is no stoppage of the whole mill between noon and 2 P.M. as required by the Act. There is no shift system for adults; all work the full hours of the mill, getting intervals for rest at times fixed by the headmen. The manager states that the late start at 8 A.M. enables the men to take a meal before coming in the morning, and so there is less going out during the day. In the ring spinning department, out of about 70 half-timers 12 very small children, apparently under 9 years, were observed. Wages are paid weekly. Labour is scarce, though in adjacent jute mills there is no scarcity.

CALCUTTA—*continued.*

Serial no. of factory.	Notes.
118—*contd.*	The higher wages and more comfortable conditions of work in a jute mill are the apparent reasons for this. The Commission was struck by the hot, oppressive atmosphere in this mill compared with the comparative airiness of an adjacent jute mill, which was a fair sample of all the Calcutta jute mills.
119	*Sugar refinery.*—The refinery employs 551 hands, including 25 boys (all over 14 years) and 10 women. It works day and night by shifts, the first shift from 8 A.M. to 4 P.M., the second from 4 P.M. to midnight, and the third from midnight to 8 A.M. Any man working over 8 hours in the 24 is paid for overtime. The amount of overtime worked does not appear to be excessive.
120	*Electric power station.*—The works employ about 100 men, including mechanics in the repair shop. No women or children are employed Men are employed in fixed watches, divided into 3 shifts. The first is from 8 A.M. to 4 P.M., the second from 4 P.M. to midnight, and the third from midnight to 8 A.M. Men in the workshop work from 8 A.M. to 5 P.M. Nothing to find fault with in regard to the hours of work, ventilation, sanitation, etc.
121	*Rope works.*—The ropery employs 226 men, 21 women and 48 children. The working hours are from 8 A.M. to 5 P.M., with an interval of rest from 1 P.M. to 1-30 P.M. Half-timers work the same hours as adults. A man earns about Rs. 10, and a boy about Rs. 5, a month. The hands are regular in attendance, about half of them, on an average, taking no days off during a month.
122	*Oil mill.*—The mill works day and night with two shifts of men, changing at 6 A.M. and 6 P.M.
123	*Silk weaving.*—The mill employs 148 men, 14 women, and no half-timers. It works day-light hours only, with one hour's interval from noon to 1 P.M. The weavers earn from Rs. 20 to Rs. 25 a month, but the supply of skilled labour is short. Men come for two hours every Sunday to clean their looms.
124	*Jute spinning and weaving.*—The mill employs about 7,150 hands, of whom 1,355 are children, and 600 women. The working hours are from 5 A.M. to 8 P.M. The working children were watched entering and leaving the mill at the time of the midday shift; a large number of half-timers, who were obviously under 9 years (one or two between 6 and 7 years), were noticed. The operatives are mostly Bengalis living in surrounding villages up to 3 or 4 miles off. The first warning mill whistle is blown at 3 A.M. Enquiry showed that an half-timer, a child of not more than 7 years, selected by the Commission at random, had to leave his home every morning at 4 A.M. and walk 2 miles to the mill. The mill manager states that an agitation is going on among the workers for a later start in the morning. Weighed 20 adult weavers, all Bengalis, average 101 lbs. Fencing ample, latrines, 80 seats, clean.
125	*Cotton spinning and weaving.*—The mill employs 680 adult males, 227 women, and 83 half-timers. The working hours are from 5 A.M. to 8 P.M., with two hours' stoppage of the mill from 11-30 A.M. to 1-30 P.M.—total 13 hours without shifts. The half-timers, some of whom were very small and obviously under 9 years, admittedly work these full hours, the same as the adults. The present system of certifying children for age, without noting marks of identification, is almost useless; one child selected at random, who was certainly not over 7 years of age, held a certificate for 10 years, and presumably this could have been obtained only by substitution at the time of examination. The weaving master, who has served for some years in Bombay mills, considers that the weavers here (mostly Cawnpore and Agra men) are from 15 to 20 *per cent.* inferior to the Bombay weavers; the daily output of a good weaver here is only 16 lbs. of cloth 66 inches or 72 inches wide, whereas a Bombay weaver would produce up to 20 lbs. of the same cloth. The weaving master estimates that, out of the 13 working hours, a weaver is away nearly 2 hours from his loom. The weavers all say they want a 12 hours' working day, with a midday interval of half an hour, *i. e.* 12½ hours from start to finish. Latrines disgracefully dirty. Special factory Inspector's last visit was eleven months ago.
126	*Jute spinning and weaving.*—The mill employs 5,680 adult males, 1,118 women, and 778 half-timers—total 7,576. The hours of working are from daylight to dark; the workers in the spinning department are arranged in 3 shifts as follows:— A from start to 9 A.M., and from 12 noon to close. B from start to 12 noon, and from 3 P.M. to close. C from 9 A.M. to close. It is explained that during the period from 3 P.M. to the close, when all three shifts are present, each man gets about an hour off by arrangement with the headman. The weavers work the full day without shifts, and without extra hands being provided by

CALCUTTA—*continued.*

Serial no. of factory.	Notes.
126—*contd.*	the mill, each set of four men relieving each other for intervals of rest. There is no cleaning of machinery on Sunday, and the mill stop always at 5 P. M. on Saturday to give time for cleaning them. The half-timers were about the smallest lot seen by the Commission, a large number being under 9 and some only about 6 years. This mill was specially visited as it works only day-light hours, without electric light, alongside a mill working from 5 A M. to 8 P.M., and the Commission wished to ascertain the result in respect of the supply of labour, production, etc. The manager stated that there is a scarcity of weavers in the cold weather, when the working day is short, because many hands leave him for mills which work by electricity, returning to his mill in the longer day of the hot weather. The production is also worse, comparatively, in the cold weather, because the mill has to take on inferior weavers then. The weavers are paid on their production, a 'stent' (task) of 12 'cuts' in the hot weather months and 10 'cuts' in the cold weather being fixed, and any production over that being paid for at higher rates. The weavers appear to be content with the length of the working day in the hot weather, and to want an equally long one in the cold weather. There is no special scarcity of labour in the spinning department, and the hands there seem to like ten working hours. The manager, personally, approves of a fixed day from 5-30 A.M. to 6-30 P.M., with a half holiday on Saturday. Thirty Europeans are employed here, and they would all like a shorter day though they might lose the 'electric light' allowance. After visiting the mill, inquiries were made outside from a number of hands employed both in this mill and in the adjacent mill working from 5 A.M. to 8 P.M. The result was to show clearly that there is no unanimity among the *weavers* here on the subject of the restriction of hours; many of the upcountry hands prefer the long hours from 5 A.M to 8 P.M., and stated that they had changed from the one mill to the other so as to be able to work those hours; the local (Bengali) weavers seemed on the whole to prefer the shorter hours, complaining particularly of the very early start (5 A.M.) in electric-lit mills, as many of them lived at some distance from their work. It was the unanimous opinion of those in the *spinning* department who were questioned that 5 A.M. was too early to commence work, especially for the young children. It was difficult to keep them awake at their work at that hour.
127	*Jute spinning and weaving.*—The mill employs 4,326 adult males, 1,515 females, and 969 half-timers—total 6,810. The following information as to the work people is interesting:— Hindus 5,003. Local men 1,154. Living in Company's lines 1,338. Mahommadans 1,807. Upcountry men 5,656. Living in villages 4,318. The working hours are from 5 A.M. to 8 P.M., with the usual shifts in the preparing and spinning departments. The manager states that when a twelve-hours working day was tried for 6 months, from January to June in 1904, it was found that the work improved, production being better in proportion to the number of hours worked; he could not state what the percentage of improvement was. It is admitted that the hours for the weavers are sometimes from 4-30 A.M. to 8-30 P.M., with intervals for rest as arranged by themselves, but each weaver must be present at 4-30 A.M., and must not leave till 8-30 P.M. The manager thinks that with a twelve-hours day the hands would not go away for such long periods of leave in the hot weather, and that the shortage of production due to shorter hours would be made up to some extent by better production during the hot weather months. At present many looms stand idle during the hot weather owing to the absence of the weavers, and the shortage of production from this cause sometimes amounts to 10 *per cent.* The manager thinks the men would not object to a shorter day, and that it could be introduced gradually, without serious difficulty. The hands on fixed wages would lose the extra pay which they get for work by electric light, but even at present one-third of them do not get this extra money. Here, as in almost all the jute mills on the Hugli, there is an excellent system of septic tank latrines, which in some cases are made available also for the population outside the mill premises. The arrangements could hardly be improved on, and similarly those for sanitation, water-supply, etc., are generally admirable.

NARAINGUNJ—MAULMAIN.

Serial no. of factory.	Notes.
	NARAINGUNJ.
128	*Jute baling.*—The press employs about 1,000 adult males, and 40 boys, in the season. The working hours are usually from daylight to dark, but at the height of the season work occasionally goes on from 5 A.M. to 8 P.M. As in other jute presses the work is seasonal, and lasts for 8 months a year at the most, August and September being the busiest months. All the work is done by contract—the press company arranging with one principal contractor who sublets the different operations (sorting, pressing, etc.) to smaller contractors. The press company keep no registers of men, women or children employed, and make no direct payments of wages to them; as far as the company is concerned the basis of payment is the number of bales pressed. Boys are employed only on the making of string and rope for baling; some under 14 were observed at work. The management admit that no attempt is made to get these children certified for age, or to restrict their hours of working, and apparently the Factory Inspector (Civil Surgeon of Dacca) has never attempted to enforce the law in this respect. It seems to have been thought that, as the whole work was done by contract, it was not necessary for the company to enforce the provisions of the Act. The hands take intervals for rest, meals, etc., as arranged among themselves; there is no general stoppage of pressing work for a midday interval; work is only rather slacker when a number of men go outside. The control of the workers and their work is left entirely to the contractors; the company engage only the engine mechanics and the office clerks. The workers are a strong, healthy lot; weighed 20 men, average 108 lbs.
129	*Jute baling.*—The system of working is as described in No. 128.
130	*Jute baling.*—The system of working is as described in No. 128.
131	*Cotton ginning and pressing.*—The season is from the middle of January to the end of July, the cotton coming from the hill-tracts of Assam and Tippera. The factory employs 300 to 400 hands, all of whom are paid on the piece-work system by a contractor, the company keeping no register of names of women and children employed. The women are employed in separating and sorting the cotton, and earn from 4 to 6 annas a day. A number of children were observed with their mothers. The 30 gins are worked by men who get about 7 annas a day. Three men are employed for each two gins, so as to allow for reliefs. The usual working hours are from 6 A.M. to 6 P.M., but on rare occasions (only 3 or 4 days last year) work goes on up to 9 P.M., the men being paid overtime. There is an 'opener' in use; it delivers upwards, and there is no danger to the men employed on it.
132	*Jute pressing.*—There are seven *pukka* presses, employing about 2,000 hands, of whom 1,400 (including about 100 women) are engaged in sorting the jute, and the rest in carrying and pressing. In the assorting department there are no fixed hours, the workers come and go as they please, being paid by piece-work by a contractor, and earning from 10 to 12 annas a day. The air in the assorting rooms was thick with fluff; no children were observed there. The men on the presses work, as a rule, from 6 A.M. to 6 P.M. and very occasionally up to 9 P.M.; they are brought and paid by a contractor, who gets so much a bale from the company. The men arrange among themselves for intervals of rest; probably none work over 8 hours a day, as the work is so hard. 18 men are engaged for each press, though a press can be worked by 7 men only. The average daily earnings of a pressman are 10 annas. The factory is inspected frequently by the Civil Surgeon of Dacca, who is said never to have objected to the presence of the young children in the sheds. A strict enforcement of the Act as to women and children would not inconvenience the company. The latrines are not inside the premises, but in the coolie lines 300 yards distant; there are 92 seats. There are coolie lines to house 2,500 persons, the floor space of a room varying from 10′×10′ to 20′×20′; the houses are very clean and sanitary; there is a supply of filtered water and concrete washing platforms. Most of the hands are up-countrymen who come back year after year; the local men are not strong enough for the work of *pukka* pressing, but are engaged elsewhere in Narainguni on *kachcha* pressing.
	MAULMAIN.
133	*Saw mill.*—The mill employs 379 hands, of whom 69 are Burmese, 268 Tamils or Telugus, 9 other Hindus, 31 Chittagonians, and 2 Chinese; no half-timers, and only one or two women, are employed. There are only a few of the workers between the age of 14 and 18 years, and most of these are learners. The hours of work are from 6 A.M. to 5-30 P.M., with an interval of 1½ hours from 11 A.M. to 12-30 P.M. Work stops at 4-30 P.M. on Saturday. No work is ever done on Sunday, and besides Sundays about 12 other holidays are given in a year, *viz.*, 2 Hindu, 8 Burmese, and 2 Christian holidays. An average wage for an Indian labourer is Rs. 15 a month.

MAULMAIN—*continued.*

Serial no. of factory.	Notes.
	Burmans are employed on work which requires skill, *e. g.*, the cutting up of the logs, and they receive generally higher wages, ranging from Rs. 30 to Rs. 60 a month. Attendance is fairly regular, but the Indian workmen go to their homes in the Madras Presidency once every two or three years.
134	*Rice mill.*—The mill employs 54 hands (in 2 shifts—of 27 each) in the milling department; these are all permanent hands engaged by the mill and receive about Rs. 15 monthly pay. Besides these, there are a large number of coolies, as many as 250 in the busy season, employed in carrying paddy from boats to the "hopper," and in taking rice back to the boats. These men are paid by contractors, and earn as much as one rupee a day, the mill paying the contractor according to the number of bags. Only one or two boys are employed outside on tallying rice-bags, and two women are engaged in testing samples of rice by counting the number of broken grains in a hundred. The hours of work are :— (*a*) from 6 A.M. to 6 P.M. for about 3½ months; (*b*) from 6 A.M. to 10 P.M. for about 1 month ; (*c*) day and night working (with 2 shifts) for about 1½ months. The mill is shut down for about 6 months. It is essential to get the whole paddy crop milled by the end of March, before the early showers of rain come, because storage accommodation in this part of Burma is scanty, and one shower of rain would spoil any paddy lying in the open. There is no stoppage of the mill for a mid-day interval, but each worker gets 1½ hours off work in the 12 at such time as the headman can arrange to let him go. There is very little going out and in apart from this customary interval. When the mill works from 6 A.M. to 10 P.M., the men get another short interval between 6 P.M. and 10 P.M.; they are paid at the rate of 1½ days' wages for this long day, and are always sorry when the whole night working has to be introduced, and they have to work in 12-hour shifts. The contract coolies are all Madrasis or Chittagonians. The sturdy Madrasi (Coringi) carries a bag of rice weighing 224 lbs.; the less sturdy carry baskets of paddy, weighing 100 lbs., to the hopper. Attendance during the month is very regular, coolies being seldom absent, even for one day, except on account of sickness. When the mill is shut down, the permanent milling hands are mostly kept on to clean machinery, etc.; the coolies get employment in cultivating for Burmans or in other work, while some go home to India. There is some shortage of outside coolies at the height of the rice season, but no shortage of milling hands. No Burmans work in the mill. The mill is inspected once a year by the medical inspector and once by the factory inspector. Only the milling department is treated as coming under the Factory Act; the coolies carrying paddy to the godown and hopper, and rice from the mill to the godown or boats, are treated as not under the Act. This is in accordance with an order issued by the Local Government in 1897.
135	*Saw mill.*—The mill employs about 50 hands, all adult males. The working hours are from 6-30 A.M. to 11 A.M. and from 12-30 P.M. to 5-30 P.M.—a total of 9½ hours, extending to 10 hours in the longer days.
136	*Saw mill.*—The mill employs about 200 hands, all adult males over 18 years. The conditions of work are similar to those described under no. 133. The working hours are from 6 A.M. to 11 A.M., and from 12-30 P.M. to 5-30 P.M., or a little longer in the hot weather. An ordinary coolie's wage is Rs. 12 a month, with the right to take away a bundle of firewood every day; this has been the rate of wages for the last 20 years. The saw mills can get men at this wage (which is low compared with wages earned in adjacent rice mills) because they give permanent employment and free fuel.
137	*Rice mill.*—The mill employs in the milling department 72 hands, in 2 shifts of 36 each; all are adult males over 18 years; it also employs in the outside department 169 coolies in the daytime and 39 at night; the only children employed are one or two boys who tally the baskets of rice. No women are employed. The conditions of work are generally the same as those described in no. 134. The ordinary hours are from 6 A.M. to 6 P.M., each man getting away for two hours as arranged by the headman, but the mill not being stopped. For a few days the hours are extended from 6 A.M. to 10 P.M., and then day and night working with double shifts commences in January and goes on till the end of March. The mill is shut down for 3 months. The latrines have 6 seats, over the creek; this is the system adopted in all the Maulmain factories.

MAULMAIN—RANGOON.

Serial no. of factory.	Notes.
138	*Tile factory.*—The factory employs 75 hands, all adult males over 18 years. The hours are from 6 A.M. to 11 A.M., and from 12-30 P.M. to 6 P.M., except for firemen, who are in three watches of 8 hours each as follows:— (1) from 12 night to 4 A.M., and from noon to 4 P.M. (2) from 4 A.M. to 8 A.M., and from 4 P.M. to 8 P.M. (3) from 8 A.M. to 12 noon, and from 8 P.M. to midnight. The workers are stated to take two good meals a day, at noon and at night, besides a light meal before coming to work in the morning. The factory does not work in the monsoon.
139	*Rice mill.*—The mill employs 30 hands in the milling and up to 250 in the outside department. The working hours are as in nos. 134 and 137, except that when work goes on for 24 hours the shifts are relieved at noon and midnight so as to give each man six hours of day-light and six of night work. The men have no regular interval; those who come at midnight eat before they come, and on leaving at noon, and have something brought to them in the mill at 6 A.M.; those coming at noon eat before coming, and have something brought at 6 P.M. When work goes on from 6 A.M. to 10 P.M. without a shift, a few extra men are employed and each man is allowed to go home to eat in turn: extra pay is given for work over 12 hours. When only day-light hours are worked (6 A.M. to 6 P.M.) each man is allowed to go home in turn for 1½ hours. When the hours are from 6 A.M. to 10 P.M., each man is actually at work in the mill for about 14 hours. The outside coolies, under contractors, work generally for 6 hours at a time; one set from 6 A.M. to noon, and from 6 P.M. to midnight, and another from noon to 6 P.M., and from midnight to 6 A.M.

RANGOON.

140	*Rice mill.*—The mill employs about 200 hands inside the mill, and 700 outside coolies. For about 2½ months the mill works day and night, with two shifts of workers who are relieved at 6 A.M. and 6 P.M.; at other times the working hours are from 6 A.M. to 6 P.M. There are no fixed hours for meals, and no midday stoppage of the mill. The workers get short intervals of rest at different times, as arranged by the headmen. Women are employed both on carrying paddy to the godowns and on sewing up the bags of rice, and work the same hours as the men—day and night; those sewing bags are not actually at work for more than 8 hours out of the 12; A shift consists of 18 women, and only 12 of these are generally at work at one time; they earn from Rs. 3 to Rs. 4 a week each. No children are employed. Only the hands inside the mill are paid by the company; the outside coolies are all employed by contractors, who are paid so much *per* 100 baskets of rice by the company, and they pay their own coolies. The coolies carrying paddy in 50 lbs. baskets from the boats to the godown are all Tamils, and earn from 8 to 12 annas a day; the coolies carrying 224 lbs. bags of rice are Coringis, and earn from one to two rupees a day. Weighed 22 Tamil coolies—average 110 lbs.; and 20 Coringi coolies—average 125 lbs. The fencing of the line shafts, and belting, etc., is insufficient. The only latrines are outside the mill premises, in the coolie lines; they are very insanitary. The mill hands and coolies employed here, as well as in all the other factories inspected in Burma, are a strong healthy lot of men. The Coringis who carry 224 lbs. bags of rice are of very powerful physique; the Tamils and Chittagonians employed in the mill and in carrying 50 lbs. baskets of paddy are of smaller build, but are good types of their class. There are no signs of deterioration of physique anywhere. Comparatively few Burmese are employed.
141	*Rice mill.*—The mill employs 250 men (in two shifts of 150 and 100 respectively) in the milling department, 300 men in two shifts at the hopper, 100 men sewing bags, and 1,000 outside coolies. The hours of work and the arrangements of the shifts are the same as in no. 140. A few boys under 14 years were noticed carrying 50 lbs. baskets of paddy from the boats to the godowns. The sewing up of bags, which was done in no. 140 by women, is here done by men. The fencing of machinery is well done, and fans have been fixed, where possible, to clear the air inside the mill of paddy dust.
142	*Oil refinery.*—The factory employs about 1,200 adult males; no women, or children under 14, are employed. The hours of work for continuous processes are 12 hours each for two shifts, commencing at 6 A.M. and 6 P.M. respectively. The hours are from 6 A.M. to 10 A.M., and from 11-30 A.M. to 5-30 P.M., in the other departments. In the departments where 12 hours' shifts are in force, the number of men is about 20 *per cent.* in excess of what is required at any one time; this permits of the men being allowed to go in turns for their meals at times which they arrange among themselves.

RANGOON—*continued.*

Serial no. of factory.	Notes.
143	*Saw mill.*—The mill employs 120 men, no women or children are employed. The hours are from 6 to 10-30 A.M., and from 12 to 5-30 P.M. There is no work at night. The pay of the ordinary hands is from Rs. 13 to Rs. 16 a month.
144	*Oil refinery.*—The factory employs about 4,400 adult males, 100 women, and 100 half-timers. The hours of work are as in no. 142. The women are employed in making paper boxes for candles; they are all Burmese, and are engaged by a contractor and paid by piece-work. They earn from Rs. 14 to Rs. 20 a month each; some young girls not more than 13 or 14 years of age were found earning Rs. 14 each. Six of the total number gave their ages as under 14 years. The half-timers are employed in packing candles; their present hours of work are from 7 A.M. to 10 A.M. and from 1 P.M. to 5 P.M. Those questioned stated that these hours have been in force only for a month or so, and that, previous to that, they always worked the full hours of the adults. Their statement was confirmed by some of the adults working in the same department. The half-timers are paid Rs. 8 a month each, and the same wage is paid to some of the adults who work full hours in the same department. Twenty-seven of the smallest of the half-timers were examined; 10 of them appeared to be under 9 years, and of these 10 six were physically unfit for work. It is stated that difficulty is experienced in getting a sufficient number of half-timers for the work. The physique of the work people is generally good, and the arrangements throughout the work excellent.
145	*Rice mill.*—The mill is owned and managed by a Burman; it employs 16 hands in the milling department, 8 in the engine room, 50 in carrying paddy from the boats to the mill (these include 20 Burmese—6 men and 14 women above 16 years) and 20 carrying rice to the boats, the latter are Coringis, earning not less than one rupee a day. The hours of work are from 6 A.M. to 6 P.M., for about five months in the year, and the mill is shut down for the rest of the year. There is no general stoppage for meals, but the hands are allowed to go out for a short time, as they can be spared. The mill works, for perhaps 20 days at the height of the season, all night by lamp light, a separate shift of men being engaged. The carrying coolies are engaged by a contractor at irregular times, as boats arrive with paddy; they change about in gangs from mill to mill as work offers. Fencing of machinery is somewhat deficient.
146	*Rice mill.*—About 40 hands are employed inside the mill. Conditions are generally the same as in no. 145.
147	*Rice mill.*—The mill employs about 100 adult males (in 2 shifts of 50 each) in the milling department; and, at the busiest time of year, about 1,000 "outside" coolies supplied by a contractor. These coolies are employed for the following purposes:—60 for carrying paddy from the boats to the godown; 150 in carrying paddy to hoppers; 32 in sewing bags; 60 in filling and weighing bags of rice; 140 in carrying bags to the boats. The hours of work are as in the previous two mills. The milling coolies get about 1½ hours off in the 12; this is rendered possible by engaging about 20 *per cent.* more hands than are actually required at any one time for the milling. The practice in Rangoon is to consider this provision of extra hands as equivalent to a shift, and not to stop the mill for half an hour between 12 and 2 P.M., as required by the Act. In none of the Rangoon rice mills is there even a midday stoppage. The mill stops at 1 P.M. on Saturdays. The cleaning of machinery is done on Saturday afternoon, and the mill starts again on Monday morning. Some women are employed carrying paddy from the boats to the godowns; the manager says there would be no objection to a prohibition of night work for women, because the contractors could easily get a few extra men to take their places in the night shifts. Drinking water has to be brought by boat from Rangoon. The fencing of machinery is insufficient, and no fans have been put in for clearing the air in the mill.
148	*Rice mill.*—This is a smaller mill owned and managed by a Burman. The hours of work and the general arrangements are much the same as in the previous three mills. Some women were noticed carrying paddy from the boats to the godown; they work the same hours and earn the same wages as the men. No children under 14 years were seen, but there were a few between 14 and 16. These are said not to work the full 12 hours; they go on till they get tired, and earn Rs. 2 to Rs. 3 a week. The arrangement here among the carrying coolies is to work in turns for 6 hours only at a time, *e.g.*, one set works from 6 A.M. to noon, and again from 6 P.M. to midnight. The fencing is insufficient.
149	*Rice mill.*—The mill is owned and managed by a Chinaman. It employs 80 mill hands in two shifts of 40 each and 250 outside coolies. It works day and night for three months of the year with two shifts; from 6 A.M. to 9 P.M., with one shift, for about a month; and from 6 A.M. to 6 P.M. for the rest of the year. Fencing is insufficient.

MADRAS TOWN.

Serial no. of factory.	Notes.
150	*Cotton spinning.*—The mill employs 649 men, 132 women and 285 half-timers. It works daylight hours only, varying from 11½ hours actual working in December (6 A.M. to 6 P.M.) to 13 hours in June (5-30 A.M. to 7 P.M.), an interval being always given from noon to 12-30 P.M. Half-timers work in forenoon and afternoon shifts, but the forenoon shift boys are called back after the mid-day interval, and not allowed to leave till 2 or 3 P.M. Examined 105 half-timers out of the morning shifts of about 120; of these 25 seemed to be under 9 years, though 20 of them held certificates to show they were over 9; the other 5 had not been sent for examination by the certifying surgeon. The registers of half-timers had not been filled in for three days, and the form of register did not show the morning and afternoon shifts separately, so that it was quite impossible to check the hours actually worked by any half-timer. Of the hands working full-time on the ring-frames, 28 of the youngest boys were picked out and examined. Of these 24 appeared to be under 14 years, and an examination of the certificates of 4 of these showed them to be aged 9, 10, 11 and 13 years, respectively, on the date of the visit. It was evident that a number of boys certified as under 14 years were being worked full time. Excluding doffing boys, more than half the hands in the spinning department were quite young boys, and a 'young person' class would certainly determine working hours here. Women are employed in all departments; they are said to get one hour's interval at noon, and to take the other half hour prescribed by law at different times, when they can be spared. Wages run from Rs. 2-8-0 to Rs. 3-8-0 a month for half-timers, from Rs. 4-0-0 to Rs. 5-8-0 for full-time boys, and from Rs. 6-0-0 to Rs. 11-0-0 for men. The latrines are long, open trenches, without separate seats. There is a complaint that when a batch of half-timers is sent to the certifying surgeon for examination, some are sometimes sent back unexamined for want of time, and that much trouble is thus caused to the management. Weighed 18 men—average weight 98½ lbs. The half-timer and full-timer boys seemed a very thin, weakly lot. To make a fair comparison with children outside the mill, an adjacent vernacular school was visited, and 186 children in it, not working in mills, and of ages from 6 to 14 years, were examined. Compared with these school children, the mill children seemed to be of somewhat poorer physique, and underfed. The mill spins counts ranging from 10*s.* to 40*s.*; the cotton comes from the Tinnevelly, Dhárwár, and Broach districts.
151	*Cotton spinning.*—The mill employs about 500 men, 75 women (chiefly on reeling and waste) and 100 half-timers. It works daylight hours only, with an interval from noon to 12-30 P.M. Conditions as to half-timers and wages are very similar to those in no. 150. Three small boys admittedly working full-time and earning Rs 4 a month were picked out and their cases inquired into; two of them were certified as 10 and 12 years, respectively, on date of the visit; the other had not been certified, but was apparently about 12 years of age. Piece-workers in the reeling department earn from Rs 4-8-0 to Rs. 8 a month. The certificates of half-timers in many cases show only that the boy is between 9 and 14 years; his exact age is not given. The same complaint is made that many half-timers are sent back unexamined by the certifying surgeon. The latrines are on the dry-earth system with no separate seats. Weighed 10 men—average 97½ lbs.
152	*Iron works.*—The factory employs 196 men only. The working hours are from 7 A.M. to 5 P.M., with one hour's interval at noon, except on Saturday, when work closes at 4 P.M. Overtime is sometimes worked till 6 P.M., but never later. The wages range from 2 annas to Rs. 2 a day. The manager states that during the 9 hours' day, the men do not actually work for more than about 7½ hours.
153	*Printing press.*—The press employs only full-time males; no women or half-timers are employed. Boys are not engaged unless they are certified to be over 14 years. Two of the smallest boys were examined and seemed to be under 14 years; they had not been certified, but had horoscopes to prove their age to be over 14 years. The ordinary working hours are from 9 A.M. to 5-30 P.M., with an hour's interval at noon. Overtime up to 2 or 3 hours is often worked, and on rare occasion (1 or 5 times a year for 2 or 3 days at a time) some of the men have to work from 7 A.M. to 4 A.M. the following morning, with only 2 intervals of an hour at mid-day and 1/4 hour in the evening. Ventilation good.
154	*Portland cement works.*—The factory employs 302 men, 39 women and 11 half-timers. The hours of work for the ordinary workers are from 7 A.M. to 5-30 P.M., with one hour's interval at noon, except on Saturday, when work is from 7 A.M. to 1-30 P.M. The 33 men employed on the continuous process work in 8 hours shifts, each of 11 men, the first shift from 6 A.M. to 2 P.M., the second from 2 P.M. to 10 P.M., and the third from 10 P.M to 6 A.M. They get no Sunday or other holidays. The men in the night shift change into one of the day shifts every Saturday. The women and children work by day-light only, on out-door work. All workers are paid on the

Serial no. of factory.	Notes
	10th of the month for the preceding month. The upper chamber was very dirty, and needs a fan; the fencing of machinery was deficient in some places.
155	*Cotton spinning and weaving.*—The mill employs about 3,400 men, 80 women (on building work only) and 900 half-timers, total 4,380 hands. The working hours are from 6-30 A.M. to 6 P.M. from the 1st January to the 15th March; from 6 A.M. to 6 P.M. from the 16th March to the 30th September; from 6 A.M. to 5-30 P.M. from the 1st October to the 15th December; and from 6-15 A.M. to 5-45 P.M. from the 16th December to the 31st December, always with an interval from noon to 12-30 P.M. Sunday is invariably given as a holiday; and besides Sundays, 6 other days were given in 1907, and 7½ days are notified for 1908. The engine stops at 5 P.M. on the afternoon preceding each holiday, including Sundays, to permit of machinery being cleaned. The half-timers work in two shifts, one from the start till noon, the other from 12-30 P.M. till the finish No women are employed inside the factory, the difficulty of arranging for the prescribed rest of 1½ hours without disturbing the working of the mill having, among other causes, led the management to replace all women workers by men. By the courtesy of the manager, all the half-timers of the one shift, 357 in number, were mustered outside for inspection by the Commission; 26 of the smallest were picked out as apparently under 9 years of age, but all were found to have been duly certified by the surgeon as over 9. The full-timer boys all seemed to be over 14. The children were a healthier and better fed lot than those seen in mills nos. 150 and 151. Weighed 14 men in carding department—average 101 lbs. „ 7 „ beaming „ „ 104 „ „ 20 „ weaving „ „ 98 „ The average of 41 was 100 lbs. In spite of comparatively short working hours, about 10 *per cent* of the hands are absent every day, and the mill has to entertain that number of extra hands to provide for such casual absences. There is one man to each loom (about 800 in all), except in the case of 50 small 26″ looms, two of which are given to one man. Weavers earn from Rs. 12 to Rs. 14 a month. The manager finds that this arrangement is economical, and he can get the necessary number of hands. The manager finds a great improvement in the skill and application of the workers generally during the last 15 years. Ventilation, sanitation and arrangements generally are excellent. The discipline of the workers struck the Commission as being specially good, there being little or no loitering about. The mid-day interval is used by practically all the workers for eating their dinner, there being no eating of meals at odd times during working hours, as in Bombay, etc.
156	*Cotton spinning and weaving*—The mill employs about 3,300 men, 300 women, and 930 half-timers, total 4,530 hands. The mill is under the same management as no. 155 and the hours of work, conditions of labour, wages, etc, are the same as there. Some of the half-timers certified as over 9 years hardly looked that age; 2 of the smallest were specially examined and found to be not more than 8, though certified as over 9.
157	*Electric power station.*—28 men working in shifts, and 180 men in the workshops, are employed. The 28 men work in 2 shifts of 14 men each—one shift works from 3 P.M. to 10-30 P.M., and again next morning from 5 A.M. to 3 P.M., and then has 24 hours off duty, during which the second shift works the same hours. The object of this arrangement is that the change of hands may be made while the machinery is running, so that responsibility for anything wrong may be easily fixed. The men are said to like the arrangement. The machinery does not run from 10-30 P.M. to 5 A.M. The ordinary hands on shifts earn from Rs. 10 to Rs. 15 a month; they get no Sundays or other holidays. The workshop hands work from 7 A.M. to noon, and from 1 P.M. to 5 P.M. Only adult males are employed.
158	*Railway workshops.*—The shops employ about 6,000 adult males—no women or half-timers are employed. The working hours are from 7 A.M. to 4-30 P.M. with one hour's interval at 11-30 A.M.; on Saturday the hours are from 7 A.M. to 12 noon. Overtime is sometimes worked from 6 A.M. to 7 A.M. and after 4-30 P.M. for an hour or two, but very rarely after 8 P.M., and then only for a few men. There used to be a considerable amount of working on Sundays, without any compensating holiday being given in the week, but this is said to have been stopped since the works were extended 8 months ago. There is no scarcity of labour; unskilled hands get 4 annas and artisans from 6 to 12 annas a day, but 10 *per cent.* of the best hands in each shop get extra rates up to one rupee a day. All apprentices are certified to be over 14 years before admission. The men are paid on the 12th of each month; work then stops at noon, and the men work instead a full day the following Saturday, when the 12th is not a Saturday. Piece-work rates are arranged so that no man earns more

MADRAS TOWN—*concluded.*

Serial no. of factory.	Notes.
	than 25 *per cent.* more than what he could get as a daily worker; the average is about 15 *per cent.* more. The hands are mostly Tamils, they are not a robust lot, and are said to be 20 *per cent.* less efficient than workers in the Bombay railway workshops, but they are physically fitter than the same class employed in the Madras cotton mills. In the year 1907, the percentage of absentees was as follows:—mechanics, 8·71 *per cent.*; coolies, 14·43 *per cent.*; general average 10·28 *per cent.*
159	*Aluminium works*.—The works employ about 250 men and 15 half-timers; the men work from 7-30 A.M. to 5-30 P.M., and the half-timers from 9 A.M. to 4 P.M., with one hour's interval at noon.

MADRAS PRESIDENCY.

160	*Sugar refining*.—The refinery employs, when working, about 150 hands. The hours for day workers are from 6-30 A.M. to noon, and from 1 P.M. to 6 P.M.; women (only 8 in number) work from 8 to 12 noon, and from 2 to 5 P.M. The men engaged on continuous processes are divided into 2 shifts, 24 men in each, with the following hours—day shifts from 8 A.M. to 1 P.M., and from 8 P.M. to 1 A.M. (10 hours). Night shift from 1 A.M to 8 A.M. and from 1 P.M. to 8 P.M. (14 hours). There are no fixed intervals of rest, and the shifts change weekly. Day-workers get from Rs. 5 to Rs 10 a month, shift men Rs. 7 to Rs. 10, and vacuum pan men Rs. 20 to Rs. 27. No children are employed.
161	*Cotton spinning*.—The mill employs about 550 men, 200 women, and 225 half-timers. It works by daylight only, with half an hour's interval from noon to 12-30 P.M., the longest day being from 5-45 A.M. to 6-45 P.M., and the shortest from 6 A.M. to 6-10 P.M. The workers leave their work to eat food from about 8 A.M. onwards, and the manager estimates that they are away from their work for about 1½ hours a day, exclusive of the mid-day interval. To permit of this, about 15 *per cent.* extra hands are entertained. Women are employed chiefly on reeling; they come to work about 7 A.M. and leave about 5-30 P.M. They have no regular interval except the mid-day half-hour, but go out frequently at other times. All hands are called to clean machinery for 2 hours on Sunday morning. The half-timers are supposed to work in forenoon and afternoon sets, but there is reason to think that in practice most of them work the whole day. The adult workers were a healthy, well-nourished lot; 18 men averaged 106 lbs. The half-timers, though active and healthy-looking, were the smallest lot that the Commission has yet seen; of 42 who were paraded for inspection about half the number seemed to be under 9 years, and some were noticed at work in the mill who could not have been over 6 years, yet all whose certificates were called for had been certified to be over 9 years. The certification is done by the local apothecary, and is checked by the Civil Surgeon of the district whose head-quarters are 28 miles distant, on the occasions of his quarterly inspection of the mill. It was stated to the Commission that the Civil Surgeon had never rejected on account of age any child passed by the apothecary. A fresh certificate of age is obtained before a half-timer is promoted to full-time, but as stated above most of the half-timers actually work full time. There are a considerable number of workers between the ages of 14 and 16 years; the manager would not object to the hours of such boys being restricted to 12. The workers come from adjacent villages, within a radius of one mile, and there is no scarcity of labour, though the Ceylon tea and rubber estates attract many coolies from this part. The attendance of the hands has been more regular since the prices of food have gone up during the last 2 years; cheap food used to result in irregular attendance. Monthly wages are as follows—half-timers Rs. 2-8-0, full-timer boys Rs. 3-8-0, boys from 14 to 16 years Rs. 4 to Rs. 5, adult males Rs. 7-8-0 to Rs. 9. Women earn Rs. 6 to Rs. 7 on reeling. In addition to these wages 3 pies a day is given to each worker for punctual attendance, and a bonus of from Rs. 1-8-0 to Rs. 3 a month if the outturn of the mill is satisfactory. Fencing and ventilation were good.
162	*Cotton spinning and weaving*.—The mill employs 325 men, 124 women and 98 half-timers. It works by daylight only, with an interval from 12 to 12-30 P.M. The mill never starts earlier than 6 A.M., or stops later than 6-45 P.M. The women are said to be given an interval from 11-45 A.M. to 1-15 P.M. When the half-timers were mustered, it was found that 79 were present and working out of a total of 93 on the roll, and the manager had to admit that the half timers really work the whole day, the only difference between them and the full-timers being that the latter, being somewhat older, get higher pay. The certification of ages seems to be fairly accurately done, though there were some doubtful cases; the certification is done by the apothecary in charge of an hospital 13 miles distant. He comes to the mill when not less than 10 children are ready for examination, and his work is checked once a quarter by the Civil Surgeon of the head-quarters station, who sometimes rejects

MADRAS PRESIDENCY—*continued.*

Serial no. of factory.	Notes.
162—*contd.*	children certified by the apothecary. The physique of the workers varied considerably, some of the children were small and weedy. 16 men averaged 107 lbs. The women were a strong and healthy lot. Men earn from Rs. 7 to Rs. 8 a month, women from Rs. 5 to Rs. 8, and "half-timers" Rs. 3 to Rs. 3½. All hands, except "half-timers," are called to clean machinery on the Sunday holiday, from 7 to 10 A.M. Wages are paid monthly, about the 15th. Fencing good, ventilation fair. There is a small ginning factory attached to the mill, which works by day-light only from March till October. For the 6 double and 6 single gins 20 women are employed, at 2 to 2½ annas a day. The line shaft is well protected by a masonry wall.
163	*Cotton ginning.*—The factory works day and night from early in March till the end of May, then by day only till the end of September. The day shift works from 6 A.M. to 6 P.M., with a stoppage of the engine for half an hour at noon; and the night shift works from 6 P.M. to 6 A.M., with a stoppage of the engine for half an hour at midnight. A shift consists of 40 women for the 32 gins. The rate of pay is from 2½ to 3 annas for day or night work. The manager stated that if the employment of women at night were prohibited, night work would become impossible. The other workers were 28 women and boys for carrying cotton to and from the gins, and 80 men for handling the bales, etc. The gins are fed by hoppers, and all the women at the gins have to do is to keep the rollers clear; the seed is carried outside to either end of the factory by mechanical conveyors which deliver direct into bags. The line shaft is over-head. The factory was unusually free from dust and fluff. The openers are fitted with cane spikes, and being outside the factory are not dangerous.
164	*Cotton ginning*—Conditions are very similar to those described in no. 163. For 82 double gins 36 women are entertained. The day shift works from 6-30 A.M. to 6-30 P.M., and the night shift from 6-45 P.M. to 6-15 A.M. There is apparently no proper interval of rest at noon, as the engine is stopped only at 6-15 A.M and 6-30 P.M. for oiling.
165	*Cotton ginning and pressing.*—The factory works for most of the year, and by day and night for about 6 months. There were at work, on the day of the visit, 53 men and 39 women in the ginning, and 58 men and 24 women in the pressing, factory. The workers all looked wellfed and healthy. Day and night shifts are relieved at 6-30 P.M. and 6-30 A.M., respectively, and there is no stoppage of the engine except for oiling. There are no fixed intervals of rest. Women are paid 2½ annas, and men 5 annas, a day.
166	*Cotton spinning.*—The mill employs 974 men, 318 women and 472 half-timers on 36,350 ring spindles. It works by day-light only, the longest day being from 6 A.M. to 6-30 P.M. and the shortest from 6 A.M. to 6 P.M. with a stoppage from noon till 12-30 P.M. The workers here are said to take a light meal before coming to work in the morning, another during the midday interval, and their principal meal at night. The women come to work between 6-30 A.M. and 7-30 A.M. and go about 5-45 P.M. Besides the midday stoppage, they have no fixed intervals of rest, but go out as they like during the day. They are all employed as piece-work reelers. 33 infants and 26 other non-working children were counted inside the reeling room. A young persons class (age 14 to 16) would control the hours of the whole mill, and would not be opposed if the hours were fixed at 12. The employment of children here seems to be strictly in accordance with the Act, the certifying of ages is well done, and the half-timers work in forenoon and afternoon sets. Each child wears a tin disc on which is stamped his serial number and a letter indicating the department in which he is employed, and his certificate number. The children are sent to the hospital, half a mile distant, to be certified. The workers are allowed to go outside during the day as they wish, but any one remaining outside more than 20 minutes at a time is fined. The manager thinks that these casual absences do not exceed one hour a day. Attendance seems to be regular, the number of absentees on the day of visit represented only 3 *per cent.* of the total number. The company has provided 140 houses, at a monthly rent of 12 annas each, for workers. Half-timers get Rs. 2 a month *plus* 8 annas for dearness of food; when advanced to full time work they get Rs. 4-8-0, and are eligible for the monthly bonus on outturn. Three pies is paid in cash daily for punctual attendance to each worker in the spinning department as he arrives. Men earn from Rs. 7 to Rs. 8 a month, and women from Rs. 5 to Rs. 6, and a monthly bonus is paid on the outturn—it sometimes amounts to 1½ annas a day in the case of rovers. Wages are paid monthly on the 12th, but the women are paid every 10 days; all hands except half-timers come to clean machinery on the morning of the Sunday holiday. The workers as a body seemed healthy and well-nourished, there were no signs of skin disease. The average weight of 21 men was 108 lbs.

MADRAS PRESIDENCY—SHOLAPUR.

Serial no. of factory.	Notes.
167	*Railway workshops.*—The shops employ 322 men; there are no half-timers or women. They work from 7 A.M. to 5 P.M., with an interval from 11-20 A.M. to 12-40 P.M.; on Saturday work stops at 11-20 A.M. Work after 5 P.M. is paid for as overtime, the rate being 1½ times that for day work. Discipline is strictly enforced during working hours: if a worker remains absent 3 days without leave he is dismissed. About 120 additional men are employed inside the works by contractors; these are not controlled by the works manager. Blacksmiths get from 5 annas to one rupee a day, fitters one rupee, and coolies 4 to 4½ annas. Skilled labour is rather scarce.
	SHOLAPUR.
168	*Cotton spinning and weaving.*—The mill employs 1,453 men, 661 women, and 182 half-timers—total 2,226 hands for 45,700 spindles (ring) and 526 looms. The working hours are from day-light to 7-30 P.M., with half an hour's interval at noon; this makes about 12¼ hours' actual work in the shortest, and 13½ hours in the longest day. Some years back, about 1898, the mill worked from 5 A.M. to 8 P.M., for a short time. The half-timers work in forenoon and afternoon shifts—from start to noon and from 12-30 P.M. to 7-30 P.M.—but no *fixed* intervals of rest are given. By the courtesy of the agents the mill was stopped for an hour on the occasion of the Commission's visit, and all the male workers in the spinning department were mustered outside for inspection. There were 606 male adults over 17 years, 186 youths between 14 and 17 years, and 92 half-timers. The physique of all seemed to be very good; and there were no signs of scrofula or other constitutional disease. The certification of age of half-timers seemed to have been done carefully, as only 6 of those working full-time might have been under 14 years and of the half-timers only 4 seemed to be under 9 years; of these four, 3 had been certified to be over 9 years. Though the youths between 14 and 17 constituted 23 *per cent.* of the full-time hands in the spinning department, the manager explained that restricted hours for a 'young person' class would not necessarily restrict the hours of the whole mill, because he could keep the adults more closely to their work after the hour for the young persons leaving the mill, if he allowed them more liberty before that hour. He could thus keep the spinning going; it only required careful organization, and could be done. At present many more hands are employed than were required on the machinery at any one time. The manager estimates that out of the 12 hours for which the machinery ran each of the hands worked actually only 9, and they could never do more than this, however much the running hours were extended. Wages are Rs 2-4-0 a month for half-timers, and Rs. 4-8-0 for full-time boys; spinners (rings and mules) earn from Rs. 10 to Rs. 12 a month, and weavers (one loom) from Rs. 13 to Rs. 14; a few weavers who have two looms earn more. Reeling is done by women, who work from 6 A.M. to dark, with two hours off at noon; they earn from Rs. 4 to Rs. 8 a month. Fencing is good. The latrines have 52 seats. Ventilation is deficient, but improvements are being made.
169	*Cotton spinning.*—The mill employs 1,212 men, 576 women and 302 half-timers, of whom 67 are girls—total 2,090 hands. The working hours are from day-light to 7-30 P.M. Some years back work went on sometimes till 9 P.M., and more often till 8 P.M.; the manager states that at the request of the hands the closing time was altered to 7-30 P.M. ten months ago. The Commission visited the factory from 6-30 P.M. to 7-30 P.M.; the atmosphere inside the mill was foul and oppressive, due to imperfect ventilation, though fans were running, and to humidifying by means of steam. The hands were inspected as they left the mill at 7-30 P.M., and did not look exhausted. The staircases are narrow, and dangerous in case of fire.
170	*Cotton spinning and weaving.*—The mill employs 1,594 men, 692 women and 152 half-timers—total 2,438 hands for 45,552 spindles (ring) and 511 looms. The working hours throughout the year are from 6 A.M. to 7-30 P.M. (standard time, which is half an hour in advance of sun time), with one half hour's interval at noon, electric light being used both at the start and finish. The women in the reeling department come about 8 A.M., get an interval from 12 noon to 1-30 P.M. and work on till 8 P.M. Half-timers are employed in morning and afternoon shifts, alternating every month, A shift working from the start to noon, and B shift from 12-30 to 7-30 P.M. without any fixed intervals for rest. Most of the half-timers attend a school on the mill premises—B set from 10 A.M. to noon, and A set from 12-30 P.M. to 3 P.M. The half-timers all wear their certificate in a small tin box round the neck, and no objection is raised to this. The certificate is drawn up in triplicate—one copy remains on the surgeon's file, one is kept by the mill, and one is given to the child. The half-timers are certified by the surgeon as between 8 and 10 years, not as "over 9 years;" a few were observed who seemed to be under 9, but all were physically fit, and the operatives generally a fine, healthy lot. A weekly bonus for regular attendance is given in the spinning department only; the returns for the week showed that 612 out of 792 hands, *i. e.*, 77 *per cent.*, earned it by being present every working day. Fencing and ventilation good; the latrines have 60 seats.

Serial no. of factory.	Notes.
171	*Cotton spinning and weaving.*—The mill employs 199 men, 73 women, and 68 half-timers—total 340 hands. It works day-light hours only, with half an hour's interval at noon. Half-timers work in 2 shifts, from the start to noon, and from 12-30 P.M. to closing time. Machinery is cleaned once every fortnight from 12-30 P.M. to 2-30 P.M. Examined 21 half-timers; of these 6 seemed to be under 9 years, though certified as over that age. The certificates do not contain any marks of identification. Wages are paid weekly, every Saturday afternoon. The workers were a good lot physically. Fencing and ventilation good.
172	*Cotton ginning and pressing.*—The machinery is all very well fenced, the line shaft being walled in. The opener delivers on to a traveller which prevents danger to hands working in front of it. The ginning factory works day and night, with two shifts, in a busy season; at the time of the Commission's visit it was working by day only. The gins are tended by women, who are paid $3\frac{1}{2}$ annas for day work and $3\frac{3}{4}$ annas for night work. The manager says it would be impossible to get men to tend the gins at night.
173	*Cotton ginning.*—The conditions of labour are the same as in no. 172. Fencing excellent
174	*Cotton ginning and pressing.*—The conditions of labour are the same as in no. 172. Only men were working in front of the opener. Fencing excellent.
175	*Cotton spinning and weaving.*—The mill employs 730 men, 135 women and 119 half-timers (85 boys and 34 girls)—total 984 hands. The working hours are from day-light to dark, the shortest hours being from 6-30 A.M. to 6 P.M. in December, and the longest from 5-20 A.M. to 7-12 P.M. in June, *i. e.*, excluding the half-hour interval at noon, 11 hours and 13 hours 22 minutes, respectively, actual working time. Electric light is installed only in some dark parts of the spinning department. The weekly holiday is always given on Monday, the local market day, instead of on Sunday. This is preferred by the hands, as they can buy their weekly supplies of grain, etc., cheapest on Mondays. The cleaning of machinery is done once a fortnight, on the morning after the weekly holiday; the ordinary hands are never called on holidays to clean machinery. The half-timers work in two shifts—A shift from the start to 9-30 A.M., and from 4 P.M. to the close, and B shift from 9 A.M. to noon, and from 12-30 to 4. Both shifts are at work together from 9 to 9-30 A.M. Examined 113 half-timers of both shifts; all were certified as over 9 years, but about a dozen of them seemed to be under 9 years. They were a poor lot. Twenty of the smallest of the full-timers were picked out and examined; of these, 13 were obviously only about 12 years old, though the certificates originally given them as half-timers showed one of them to be 14 years, two to be 15, five to be 16, four to be 17, and one to be 18 on the date of the Commission's visit. The certification of ages seems to have been carelessly done some years ago; it is better now. One of these boys named Abdul Salam, who seemed about 12 years old but had been at work for four years, was very weak; his health seemed to have been affected by the work. The adults seemed a strong enough lot. Weighed 10 spinners—average 100 lbs., and 10 weavers—average 113 lbs. Wages are paid monthly, about the 25th, for the previous month. There is a scarcity of labour, and wages are said to run rather higher than at Nagpur, especially those of women and children. Fencing and ventilation good. Good accommodation at a monthly rent of 12 annas a room is provided on the premises for a number of the hands.
176	*Cotton ginning and pressing.*—The atmosphere in the press-room was thick with fluff from the 'opener'; there was no fan or other means of clearing the air, and work in the room must be most injurious to health. On the 25th October 1905 a man was burnt to death at this press in an accidental fire which occurred in front of the 'opener'; there must always be great danger of such accidents under the present conditions of working. The charge for pressing one bale of 400 lbs. is Rs. 3-8-0; of this $3\frac{1}{4}$ annas a bale is paid to the contractor, who supplies the labour, and he pays the men working the press; they receive from 6 to 9 annas a day for a good day's work. There is never any night working.
177	*Cotton pressing.*—This press was better ventilated than the last, but the atmosphere can never be wholesome where an 'opener' is used, and there must always be great danger of fire.

CENTRAL PROVINCES—*continued.*

Serial no. of factory	Notes.
178	*Cotton ginning and pressing.*—In the ginning factory there are 44 gins; the number of hands employed is 45 men and 70 women (or double their number when working day and night). The working hours are from 6 A.M. to 6 P.M., with half an hour's stoppage at noon; the night shift, when engaged, work from 6 P.M. to 6 A.M., with half an hour's stoppage at midnight. The following table shows the number of days worked in the last four years :—

Year.	Month.	Number of the days the factory worked.			
		With day shift only up to 6 P.M.	With day shift only up to 9 or 10 P.M.	Day and night with double shifts.	Total.
1904-1905	November	15	.....	8	23
	December	12	.....	7	19
	January	23	2	.....	25
	February	1	1	18	20
	March	15	.....	1	16
	April	13	3	.....	16
	May	12	6	.....	18
	June	4	.....	.....	4
		94	12	34	140
1905-1906	November	14	.....	1	15
	December	4	.....	19	23
	January	16	4	2	22
	February	14	2	.....	16
	March	17	2	.....	19
	April	*Nil.*	.....	.....	*Nil.*
	May	16	.....	.....	16
		81	8	22	111
1906-1907	November	13	4	.....	17
	December	1	1	17	19
	January	2	.....	22	24
	February	1	1	6	8
	March	23	.....	2	25
	April	16	.....	.....	16
	May	20	.....	.....	20
	June	4	.....	.....	4
		80	6	47	133
1907-1908	November	13	.....	3	16
	December	1	.....	21	22
	January	.....	.....	24	24
	February	13	.....	4	17
		27	.....	52	79

To tend the 44 gins, 56 women are employed, *i. e.*, one for each gin *plus* 12 extra hands to relieve the others, so that each woman may get at least 1½ hours' rest; in addition, 14 women are employed for removing cotton seed, sweeping, etc. No children are employed, but the manager states that women sometimes leave their children to tend the gins when they go out. Women are paid 3 to 3½ annas for day work, and 3½ to 4 annas for night work; men get from 7 to 10 annas a day. All hands are engaged and paid by a contractor. The manager says that if women are not allowed to work at night, there will be difficulty in getting men to take their places. and in any case the men will cost twice as much. The ginning factories in this district close on Sunday, which is also the local bázár day. The press works only by day; it has to work on Sundays occasionally to fulfil urgent contracts, but it always gives a holiday on some other day instead. The manager does not object to a weekly holiday in either the ginning or pressing factory.

179 *Oil mill.*—The mill is not under the Factory Act; it has four presses employing 18 men by day and 18 by night, the shifts being relieved at 6 A.M. to 6 P.M. respectively. There is no interval of rest, but the manager explains that for each pair of presses 4 men only are required, while 5 are actually engaged, so as to give each man a certain amount of relief. Pay is 5 annas a day. Work stops from 6 A.M. on Sunday to 6 A.M. on Monday, but all hands come to clean machinery from 6 A.M. to 4 P.M. on Sundays. Men on the day shift go on the night shift next week, and *vice versâ*.

CENTRAL PROVINCES—*continued.*

Serial No. of factory.	Notes.
180	*Cotton ginning.*—The gin works either 24 hours, with two shifts, or 12 hours without regular reliefs. There is no intermediate system of 14 or 15 hours. An interval of 1½ hours is given both to the day and night shifts, the engine being actually stopped for this time. For the 18 gins 18 women, *plus* 3 for casual relief, constitute a shift. Women get 3 annas for day, and 3½ annas for night, work. Fencing good.
181	*Cotton ginning.*—There are 12 gins, which employ only 36 persons, and the factory is therefore not under the Factory Act. It works only by daylight; the man-in-charge stated that there was an interval of half hour at noon, but the workers denied this. The line shaft was sufficiently fenced.
182	*Cotton spinning and weaving.*—The mill employs 700 men, 210 women, and 184 half-timers on 24,000 spindles (ring) and 160 looms. The hours of working for men, women and half-timers, and the conditions generally, are the same as in No. 183. It is explained that when the half-timers leave the mill in a body from 8-30 to 9 A.M., and from 3 to 3-30 P.M., the full-timers do the "doffing"; this arrangement, if carried out in practice, must interfere considerably with the working of the mill. The mill-hands eat their forenoon meal generally between 8 and 10 A.M., leaving their work for this purpose when they like. It has been found impossible to prevent this casual way of leaving work. Much loitering about the mill compound was observed on the occasion of the Commission's visit. The supply of labour has become much scarcer of late years, especially in the case of full-time and half-time boys. The adult workers, men and women, were an exceptionally sturdy, well-set-up lot. The children, as in No. 183, were rather a stunted poor lot; and under a system of certificates of physical fitness some of them would have been rejected. 98 half-timers were paraded for inspection, and were all found to have been duly certified for age. Of the full-timers 8 were picked out who were probably under 14 years, three of them not being over 12 years; weighed 25 men—average 102 lbs. Ten *per cent.* extra hands are stated to be employed in the carding and roving, and 25 *per cent.* in the spinning, departments. Three-fourths of the weavers run two looms each, and earn an average of Rs. 16 a month; those on one loom get only from Rs. 8 to Rs. 10. Ventilation is good, except in the carding room, which is also badly lighted. The certifying surgeon lives 26 miles off; formerly children used to be employed pending the grant of a certificate; this is not allowed now, and they have to wait for the quarterly visit of the surgeon, or they are sometimes sent at the expense of the mill to the surgeon's station.
183	*Cotton spinning and weaving, also ginning.*—The mill employs about 640 men, 165 women and 110 half-timers; there are 14,688 spindles (ring) and 160 looms. Daylight hours on the longest working day in 1907 were from 5-25 A.M. to 7-20 P.M. on the 10th July (actual working hours 13 hours 25 minutes) and on the shortest from 6-25 A.M. to 5-55 P.M. on the 17th December (actual working hours 11 hours); the average over the whole year is 12 hours 3 minutes There is an interval for the whole mill from noon to 12-30 P.M., and, besides, the half-timers and women get intervals of rest from 8-30 to 9 A.M. and from 3 to 3-30 P.M. Half-timers work in two sets, the first from the start to noon and the second from 12-30 P.M. to the finish. The weekly holiday is on Monday, the local market day. Forty-six half-timers were examined; they were all over 9 years, but were a poor, rather weakly lot. Of the full-time boys 13 were picked out who seemed to be under 14 years, though on the basis of their certificates they were all over that age, except one whose certificate showed him to be only 13 years. Half-timers get Rs. 3, and full-time boys Rs. 5 a month; to encourage them to be regular in attendance a bonus of 2 annas for a half-timer and 4 annas for a full-timer is given to every boy who is present every day of the week. In the month previous to the Commission's visit 220 out of a total of 300 boys earned the bonus (*i.e.* 73 *per cent.*). The women (all in the reeling department) earn from Rs. 5 to Rs. 8 a month. The manager thinks that the average number of absentees from work is only 7 *per cent.* Fencing and ventilation good; the latrines have 36 seats. The temperature of the preparation room at 8 A.M. was 95° Fahr. Cleaning of machinery is done every fortnight, on the afternoon preceding the holiday.
184	*Cotton spinning and weaving, also ginning.*—The mill employs about 700 men, 200 women, and 55 half-timers on 18,000 spindles (ring and mule) and 179 looms. It works by day-light only, with an interval of rest from 11-30 A.M. to 12 noon; the actual working hours of the longest day in June, and of the shortest day in December, are 13 hours and 5 minutes and 10 hours and 45 minutes respectively, the average over the whole year being 11 hours and 38 minutes. Half-timers work in two shifts; the first from the start to 11-30 A.M. with half an hour's interval from 9 to 9-30 A.M., the second from 12 to the finish, with an interval from 3 to 3-30 P.M. Women get three intervals of rest—9 to 9-30 A.M., 11-30 to noon, and 3 to 3-30 P.M. The weekly holiday is given on Monday, the local bazar day; when the mill works on Monday to make up for a special

Serial no. of factory.	Notes.
	holiday, the hands have to be allowed to leave at 3 P.M. to go to the bazar to buy their weekly supplies. Ninety *per cent.* of the operatives are *mahars* by caste; they are a well-fed, healthy-looking lot; weighed 44 men in the spinning department average 100 lbs., and 12 in the weaving department average 112 lbs. 24 half-timers were examined; all were over 9 and some appeared over 14 years; they were a strong healthy lot. No full-timers under 14 years were observed working full time. The certification of ages seems to be very carefully done, and no boy is allowed to work until certified. The Civil Surgeon visits the mill once every two or three months, and boys willing to work have to be kept waiting till he comes. Fencing and ventilation are excellent, and the arrangements generally are admirable. The mill is entirely under native management.
185	*Cotton spinning and weaving.*—The mill employs 2,983 men, 770 women and 732 half-timers (617 boys and 115 girls), a total of 4,485 hands on 76,000 ring-spindles and 1,214 looms. It works day-light hours only, varying from 13 hours 9 minutes in June to 10 hours 54 minutes in December, the average over the whole year being 12 hours 3 minutes, exclusive of the midday interval. The half-timers in the spinning department work in two sets, the first from the start to 9 A.M. and from 4 P.M. to the finish, and the second from 9 A.M. to 4 P.M. with the half hour's interval at noon, the sets changing every fortnight. The half-time girls are employed in the reeling department only, and they all work from 9 A.M. to 4-30 P.M. with the midday interval. A number of women are employed in the bleaching and dyeing departments, but the manager states that they cannot be got to work alongside the men in the spinning and weaving departments. Examined 124 half-time boys, they all seemed to be about or over 9 years, and certification had been carefully done, but the general physique was poor. Sixteen of the smallest full-timers were picked out of the spinning room; 8 of them seemed to be under 14 years, but on the basis of their original certificates as half-timers they would all be over 14 years. Promotion to full-time work here is based on the original certificates as half-timers; fresh certificates are not taken out The men and women looked a healthy lot; 21 men from the carding department averaged 102 lbs. and 30 weavers averaged 103 lbs. each. Half the weavers tend two looms each, and half one only. There has been a scarcity of labour in recent years, especially in the spinning and weaving departments; attempts have been made to recruit gangs of men from up-country, but many of them cannot stand the noise in the mill, and leave after a day or two. An attempt was made to employ half-time girls in the spinning department, but they could not be induced to work with the boys. The mill is prevented from making further extensions owing to scarcity of hands. The latrines have 105 seats, some on the septic tank system. The arrangements for ventilation and cooling the air are excellent. Full particulars as to wages and other conditions prevailing in this mill are given in the printed evidence attached to the report.
186	*Cotton ginning and pressing.*—The Commission visited this factory to inspect the press house in which two women were burnt to death by a fire occurring in front of the cotton opener on the 22nd January 1908. It appears that 4 women were sitting on the cots in front of the opener, dusting cotton as it was shot out of the opener, when a spark from the opener set the whole room in a blaze; two of the women escaped, but the other two fell down among the cotton and were found dead a few minutes later, when the fire was extinguished, probably from shock as much as from burns. All the men who were working in the room escaped.
187	*Cotton spinning and weaving*—The mill employs 575 men, 161 women and 309 half-timers (252 boys and 57 girls), a total of 1,045 on 16,500 spindles and 182 looms. It works daylight hours only, the same as in No. 185. Examined 102 half-time boys; of these 16 were certainly under 9 years, though they were all certified to be over that age. Besides these 16, there were 13 of the lot who seemed physically unfit and the boys as a whole were a thin, poorish lot. Examined also 29 half-time girls (3 from the spinning and 26 from the reeling department); all seemed over 9 years, and they were healthy and well nourished. The half-timers work in forenoon and afternoon sets, relieving each other at the midday interval; the forenoon set is said to get an interval of half an hour from 9 to 9-30 A.M., and the afternoon set from 3 to 3-30, the doffing work during these intervals being suspended, or carried on only so far as the full-timers can do it, resulting in a loss of production. It was stated by the half-timers that 5 of their numbers (whose names were ascertained) were *sáwaiwálas* (*lit.*, one-and-a-quarter, or extra, timers) and worked full-time for extra wages, though still kept on the list of half-timers; they also stated that this system was much more common some time ago. The management did not deny the fact. The full-time boys seemed a fair-sized lot; only 4 were observed who might have been under 14 years. There is said to be considerable scarcity of hands. The half-time girls in the reeling department get Rs. 2-14-0 a month, and this is deducted from the piecework earnings of the women whom they assist.

CENTRAL PROVINCES—*continued.*

Serial no. of factory.	Notes.
188	*Cotton ginning and pressing.*—For 24 gins 29 women are employed, and the factory runs from 6 A.M. to as late as 9 P.M. with these hands; for all night running a separate shift of women is employed. A woman gets 3 to 3½ annas a day, and ¾ anna extra when work goes on up to 9 P.M. All the hands including women on the gins are employed and paid by a contractor, and no nominal lists are kept. The cotton opener in the press-house was of the usual dangerous type; only men were working in front of it.
189	*Flour mill.*—A small steam flour mill not under the Factory Act; it employs 9 men and 5 women, and works ordinarily by daylight only, but occasionally up to 9 P.M. and even all night, when the hands, who are not relieved, snatch such intervals for sleep as they can. The factory was clean and well arranged. Grain is ground on commission.

PUNJAB.

190	*Flour mill.*—The mill employs 83 men; there are no women or children. It works ordinarily from 6 A.M. to 6 P.M.; sometimes work goes on till 9 P.M., and for about 40 or 50 days in a year the mill works day and night with double shifts. When working till 9 P.M. without relief the hands are paid overtime at the rate of ¼ day's wage for the 3 hours. Previously there was no midday stoppage, but about two months ago the stoppage of the mill from 12 to 12-30 P.M. was introduced. The number of men actually required at any one time for the inside milling work is 14, but 21 are always employed, so as to permit the men to leave their work for purposes of eating, drinking, etc. By the courtesy of the manager the mill was stopped, and all hands were mustered outside for inspection; the 21 inside hands were all of good physique, and showed no sign of lung ailments, except one case of bronchitis; the outside hands were a particularly fine lot of men. Arrangements for ventilation and clearing the air of dust in all compartments were excellent. The fencing was sufficient, except in the bagging department. The latrines have 5 seats.
191	*Cotton ginning.*—The season lasts from the beginning of November to the end of March, and the usual hours of working are from 6 A. M. to 8 P. M., with one hour's stoppage at noon. For the 36 gins only 40 women (with 3 overseers) are employed, so that each woman must work more than the 11 hours prescribed by law. The women are paid 2½ annas a day for 12 hours' and 3 annas a day for 13 hours' actual work. The fencing of the line shafts was sufficient; the cotton-opener is outside, and not dangerous.
192	*Iron workshop.*—72 men are employed who work ordinarily from 7 A. M. to 5 P. M., with one hour's interval at noon. Sugarcane presses are the chief article manufactured, and during the busy season, September to December, when the demand for presses is great, work goes on sometimes till 9 P. M. During these four months this factory has been exempted by notification from the obligation to stop work on Sundays. Daily wages range from 4 to 8 annas a man.
193	*Iron workshop.*—The shop employs about 40 men. The hours of work and the conditions of labour generally are the same as in No. 192, but there is no exemption in respect of the Sunday holiday.
194	*Cotton spinning.*—The mill employs 435 men, 46 women and 93 children—total 574 hands for 15,000 spindles (ring and mule). The working hours from October to March are from 6-30 A.M. to 9 P.M. with half an hour's stoppage at noon, *i. e.*, 14 hours' actual work; in April and May the hours are from 5-45 A.M. to 8 P.M.; in June from 5 A.M. to 7-20 P.M.; in July from 5-10 A.M. to 7-30 P.M.; in August from 5-30 A.M to 7-15 P.M.; in September from 6 A.M. to 7 P.M.; and in October from 6 A.M. to 8 P.M.; always with the half hour's stoppage at noon. As a rule all the spinning mills here stop working by electric light in the hot weather. The manager estimates, by personal observation, that an average worker leaves his work for about 15 minutes every hour, often to take opium, ganja, etc., to which the hands here are much addicted. The manager admits that until a few months ago the Factory Act was not enforced at all; when he came to the mill about 9 months ago, all the children used to work full-time, irrespective of age. He states that he is trying to effect a gradual improvement in this respect, and that about 20 out of the 93 children now work only three-quarters of a day, the first set coming about 7 A.M. and staying till 4 P.M., and the second set coming from 12-30 P.M. till 9 P.M; but the arrangements for relieving them are left entirely to the jobbers, and there are no clearly defined shifts. So-called half-timers get Rs. 3-2-0, and the other boys who work full-time Rs. 5-4-0. a month. The manager states that production *per* hour is better in the long working hours of the cold weather, because the hands stay inside more to keep themselves warm.

PUNJAB—*continued.*

Serial no. of factory.	Notes.
195	*Biscuit factory.*—The factory employs 39 hands (all men) and works only from 7 A.M. to noon, and from 1 P.M. to 5 P M.; there is no night work. The hands, who are all Hindus, earn from Rs. 7-8-0 to Rs. 12 a month.
196	*Flour mill.*—The mill employs 193 men only, and works as a rule day and night. The 96 men in the milling department are divided into two shifts of 43 each, each working 12 hours, and being relieved at 7 A.M. and 7 P.M. respectively. The mill stops from 6 A.M. Sunday to 6 A.M. Monday; but all hands attend to clean machinery on Sunday from 6 A M. to 2 P.M. Wages run from Rs. 7-8-0 to Rs. 15 a month. Overtime is frequently worked, a full day's wage being given for any period over 4 hours, and half a day wage up to 4 hours. The pay register for the month of February 1908 showed that in the milling department men occasionally worked 36 hours at a sketch, when their reliever failed to turn up; the manager explained that on such occasions the men actually snatch a good deal of sleep during the night. The manager states that men suffer from asthma in the mill. The dust in the wheat receiving department was certainly very bad at the time of the Commission's visit, it being almost impossible to remain in the room; there would be no difficulty in clearing the air of all dust by exhaust fans.
197	*Cotton spinning and weaving.*—The mill employs 370 men, 30 women and 102 children (including 2 girls)—total 502 hands. The working hours are from 6 A.M. to 9-30 P.M. in the cold weather, and from 5 A.M. to 7-30 P.M. in the hot weather, with a stoppage of an hour from noon to 1 P.M. all the year round. The manager admits that until his arrival three months ago all the children in the mill worked full time, irrespective of age; since then a few of the youngest children have been put on half-time. The pay register of the month preceding the Commission's visit showed that 20 children were paid half-time wages that month. A large number of full-time boys, who were obviously under 14 years, were observed at work.
198	*Cotton spinning*—The mill employs 499 men, 41 women and 53 children—total 593 hands. The working hours are from 5 A M. to 7 P.M. from April to September, and from 6-15 A.M. to 9 P.M. from October to March, with a stoppage of half an hour at noon throughout the year. All the children admittedly work full-time, irrespective of age; 20 were picked out in the spinning department and examined, all were under 14 years, but over 9. There was apparently no certification for age until about 2 months ago, when a new manager was appointed; since then 2 lots of children were sent to the Civil Surgeon for certification, 10 on the 10th March and 14 on the 27th March 1908. All except one were certified as over 9, and under 14 years; but in spite of this they are still working full-time. The certificates contain thumb impressions, but no marks of identification. In the reeling department a number of young children, from 5 to 9 years of age, were observed; they were helping relatives on piece-work and are said to be learning the work. As soon as they have learned a little, they are permitted to work full-time, irrespective of age. Weighed 10 men—average 104 lbs. Average monthly wages and earnings are said to be, for children in the spinning department (all males), Rs. 4-8-0, spinners Rs. 15, piecers Rs. 10 to Rs. 12-8-0, reelers, men Rs. 9 to Rs. 12, women Rs. 7 to Rs. 9. The latrines have 12 seats; they are outside the mill compound, and are very dirty. Ventilation fair. The temperature in the spinning room at 4-30 P.M. on the 1st April was 100·5° Fahr.
199	*Cotton spinning and weaving.*—The mill employs 669 men, 58 women and 47 children—total 774 hands. The working hours are :— from 6-10 A.M. to 8 P.M., from October to March, and from 5-30 A.M. to 7 P.M., from April to September, with a stoppage from 12-10 P.M. to 12-55 P.M., all the year round. Sunday is invariably a holiday and in addition certain native holidays are given, so that the mill works only 300 days a year. It was admitted by the manager that, with the exception of 7 boys who really do seem to work only half a day, all the children work full-time, irrespective of their ages. A number of full-time throstle boys, who were obviously under 14 years of age, were seen at work. All hands are called every Sunday to clean machinery up to about 10 A.M. The rates of monthly wages are as follows :—half-time boys Rs. 2-8-0, full-time boys from Rs. 5 to Rs. 7; on piece-work, mule spinners earn from Rs. 20 to Rs. 24 a month, piecers about Rs. 15, weavers (one man to two looms) from Rs. 20 to Rs 30; reelers, men, from Rs. 10 to Rs. 15 and women from Rs. 6 to Rs. 12. Fencing sufficient, except that there are no shuttle guards on the looms.

Serial no. of factory.	Notes.
200	*Cotton spinning.*—The mill employs 337 men, 37 women and 50 half-timers—a total of 424 hands on 14,000 spindles (ring and mule). The hours of work vary according to the season—

From April to July	...	6 A.M. to 7 P.M.	With one hour's interval at noon, except in October—January when the interval is only 45 minutes.
July and August	...	5-30 A.M. to 7-30 P.M.	
September	...	5-45 A.M. to 7-20 P.M.	
October and November	...	6-40 A.M. to 9-0 P.M.	
December and January	...	7-0 A.M. to 9-0 P.M.	
February and March	...	6-35 A.M. to 9-0 P.M.	

The longest day was 13¾, and the shortest 11½, actual working hours. Work always begins by daylight. Until two months ago all the half-timers in this mill were worked full-time; since then, as the result of a prosecution instituted by Government, the half-timers have been divided into proper sets, and now work not more than 7 hours a day. Of the morning set of 25 half-timers 23 were examined; they all appeared to be over 9 years, and had been carefully certified for age, marks of identification being given in each case. They seemed a poor, thin lot, and certainly 2 were physically unfit. The physique of the adults was good; they are not local men, but come from the United Provinces, Rajputana, etc. Weighed 18 men, average 109 lbs.; of these 8 were natives of Oudh, 4 of Agra and 6 of Rajputana. A number of the workers were suffering from eye complaints. Only two youths of from 14 to 17 years were seen at work, so that a 'young person' class would not effect the working hours of this mill. Half-timers get Rs. 3 to Rs. 4 a month, full-time boys Rs. 5 to Rs. 7. A class piecers on mules earn Rs. 12 to Rs. 14 a month, B class piecers Rs. 8 to Rs. 10, minders Rs. 17 to Rs. 20, women (reeling) Rs. 5 to Rs. 10. There are about 80 rooms for mill hands in the compound, let out at a monthly rent of 10 annas a room. The latrines have 12 seats. Fencing and ventilation were satisfactory.

201 *Cotton ginning, rice and flour mills and ice making.*—The factory employs 40 permanent hands, and temporary hands according to the amount of work in progress. The usual working hours are from 6-30 A.M. to 6-30 P.M., with one hour's stoppage at noon, except for the ice making—which is carried on day and night with two shifts, each working 12 hours. Occasionally the cotton ginning and flour mills are worked day and night also, in which case double shifts of workmen are employed. All the hands are adult males, except the women employed on the cotton gins, who are paid 3½ annas for day work, and 4 annas at night. There is no difficulty in getting hands.

202 *Carpet factory.*—The factory employs 600 men and boys, but is not under the Factory Act, because only hand-looms, and no steam or mechanical power, is used. Usually work is carried on by day-light only, but occasionally, to execute urgent orders, the men work at night. The workers are chiefly Kashmiris, and there are a number of small boys under 9 years at work. The head weaver on each loom contracts to do the work at so much *per* 100 stitches, and pays all the hands employed on the carpet. The boys earn from Rs. 6 to Rs. 10 a month and the head weavers are said to make up to Rs. 50 a month. The physique of both men and boys seemed to be poor; they are stated to be liable to consumption. The weaving sheds are open and well ventilated.

203 *Woollen mill.*—The mill employs about 1,000 men, 40 women and 60 children. Work commences at day-light, varying from 5-30 A.M. in summer to 7 A.M. in winter, and continues up to 6-30 P.M. in summer and 5-30 P.M. in winter, an interval of 2 hours at noon being given from May till September, and of one hour for the rest of the year. The actual working hours vary from 9½ in winter to 11½ in summer. Overtime up to 9 P.M. is occasionally worked in certain departments, generally in order to comply with urgent Government requirements, but the number of days on which overtime is worked in a year does not ordinarily exceed 45, and no women or children work overtime. Half-timers are said to work in forenoon and afternoon sets in the long days, but there is no division into A and B sets, and no separate registers are kept, so that it is impossible to say whether the law is observed. In the short days they are said to work all in one set from 8 A.M. to 4 P.M. only. It was admitted that a proportion of the children under 14 were at the time of inspection being employed for over 7 hours a day, owing to the scarcity of such labour, but this practice is now less marked than formerly, and a steady effect is being made to comply with the law. Twenty half-timers were examined, they were all over 9 years, and were in good condition. Fifteen of the smallest full-time boys were picked out and examined; 13 of them seemed to be under 14 years, and 4 of these were suffering from spleen or malarial anæmia. The general health and physique of the adults was very good, except for malaria and eye diseases. 62 men were weighed, average 118 lbs. The company has built 230 houses for its operatives, almost all are occupied and more are under construction. Many of the hands are local men coming from villages within a radius of 4 miles. Sunday is always given as a holiday, and the cleaning of machinery is done on

Serial no. of factory.	Notes.
	Saturday afternoon. The latrines have 36 seats, and there are 6 urinals, all very clean. The certification of children for age is done by the Civil Surgeon of Gurdaspore, resident 8 miles off; he comes to the mill for the purpose once every 6 months, and children coming in the interval are employed in anticipation of his examination. Ventilation and fencing very good.
204	*Cotton spinning.*—The mill employs 266 men, 33 women and 143 children—total 442 hands. It worked in January 1907 from 7-15 A.M. to 8 P.M.; in February from 7 A.M. to 8 P.M.; in March from 6-30 A.M. to 8 P.M.; in April from 5-50 A.M. to 7-10 P.M.; in May from 5-35 A.M. to 7-20 P.M.; in June and July from 5-10 A.M to 7-30 P.M.; in August from 5-45 A.M. to 7-15 P.M.; in September from 6-10 A.M. to 6-30 P.M.; in October from 6-25 A.M. to 6-15 P.M.; in November from 6-40 A.M. to 8 P.M.; and in December from 7 A.M. to 8 P.M.—always with one hour's stoppage at noon. The manager admits that until 2 months ago all the children worked full time, irrespective of age, receiving from Rs. 4 to Rs. 6½ a month. This fact having been brought to the notice of the authorities, and a prosecution being threatened, some attempt is apparently now being made to divide the children into sets and work them only half-time; but it is impossible to say how far the law is now being observed in this respect as the registers are incomplete. The manager states that as a result of his endeavour to comply with the law some of the children have left, and it is difficult to keep all the spindles going. Examined 86 children under 16 years; it was impossible to ascertain how many of them were actually working full-time and how many only half-time. Seventy-three of them were under 14 years of age, and 10 of these seemed to be under 9 years. The cases of these 10 boys were specially examined; 7 of them had been certified to be over 9 years, and 3 were not certified; they were being paid Rs. 4 or Rs. 5 a month each. The certificates give no marks of identification, though the form provides for such an entry; in some cases the father's name was not given. The adults were a strong-looking lot; the average of 11 men who were weighed was 108 lbs. Only about 5 per cent. of the hands are local men; the rest come from Oudh, Rájputána, etc. In the ginning factory attached to this mill a fatal accident occurred more than a year ago, a woman being caught by the unfenced line shaft and killed; in spite of this the line shaft has not yet been fenced.
205	*Cotton spinning.*—The mill employs 374 men, 60 women and 38 children—total 472 hands. The longest hours worked are, in March, sometimes from 6-15 A.M. to 9 P.M. with one hour's stoppage at noon—total 13¾ hours actual working. In the hot weather the mill stops at 7 P.M.; work is commenced by electric light in the winter mornings; and the average is 13 hours actual working a day. It was admitted that until recently all the boys under 14 years worked full-time; an attempt is now being made to divide them into sets, but probably most of them still work full-time. No proper registers are kept, and many young boys were seen escaping from the mill on the occasion of the Commission's visit. Here, too, hardly any local men come for employment; of 14 men picked out at random 1 came from Lahore, 3 from Jullunder and 10 from Oudh; their average weight was 113 lbs.
206	*Flour mill.*—The mill works ordinarily day and night, with 2 shifts of hands from 6 A.M. to 6 P.M., and from 6 P.M. to 6 A.M., the shifts changing every fortnight. There are 70 men in the milling department (35 in each shift) and they arrange among themselves for occasional intervals of rest. Besides, there are 70 men and 10 women engaged by day only in handling bags, cleaning grain, sweeping, etc. There is a stoppage for 24 hours on Sunday, during which the hands attend to clean machinery. Inside hands get from Rs. 8 to Rs. 15, outside coolies, who carry the bags, from Rs. 15 to Rs. 17 a month; very few local men are employed. The hands are steady in attendance and do not change as much as in cotton mills. Ventilation is extremely good, the dust being all removed by fans, etc. Fencing very good, and the general arrangements throughout the mill excellent.
207	*Oil and flour mills.*—The mill employs about 35 hands, and works usually from 7 A.M. to 6 P.M., with one hour's stoppage at noon. Occasionally work goes on till 9 P.M. to meet urgent demands. Daily wages of the hands range from 7 annas to one rupee. Machinery is cleaned on Sundays.
208	*Cotton and wool pressing.*—The press employs 27 hands, and works from 7 A.M. to 6 P.M. —never at night. The men earn from 7 to 9 annas a day. Women are employed on sorting the wool.
209	*Printing press.*—The press employs 140 hands—all adult males—and works 8½ hours in the hot weather and 10½ hours in the cold weather, exclusive of half an hour's interval at noon. Machinery was well fenced. The physique of the work-people was good. About 12 boys under 14 years are employed by contractors in folding papers; they are said to come at 9 and leave at 4 o'clock, and the manager claims that they are not under the Factory Act because they work in the building separated from the machinery, but in the same yard.

REPORT

OF THE

INDIAN FACTORY LABOUR COMMISSION,

1908.

VOLUME II—EVIDENCE.



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G. C. B. P., Simla.—No. 2 F. L. C.—6-6-08.—1,710.—R.G.G.

Evidence taken by the Factory Labour Commission 1907-08.

AHMEDABAD.

Witness No. 1.

Mr. W. Doderet, I.C.S., District Magistrate of Ahmedabad.

Mr. Doderet. Written evidence.

I do not consider it necessary that the hours of adult males should be limited, nor have I noticed that the physique of such workers has been affected by long hours. I will amplify this and other matters in my oral evidence. No actual case of the illegal employment of persons between the ages of 12 and 14 has come to my notice, but I suspect that they occur to some extent. I have not noticed physical deterioration in children of this age. I do not think there is any necessity for the creation by law of a special class of "young persons". I am in favour of a special register of all workers under the age of 16 being maintained, in order to facilitate enquiries as to the physical fitness of the youngest adults to work full time. The employment of women at night should be prohibited, unless they are widows or unmarried girls. The minimum age for children need not be raised. No Civil Surgeon should certify a child, whatever his or her age, if he considers that he or she is physically unfit to work in a mill. Before half-timers are allowed to work full time, certificates of age and physical fitness should be required. Children should only be employed in regular sets; this should be laid down by law. Factory-owners should not be required to provide education for their half-time employés at their own expense. A rule should be made, excluding non-working children from the inside of factories altogether An attempt might be made to fix a standard of purity for air, but it would be as well to prescribe that in the case of newly erected factories, no work shall commence until the means of ventilation are passed as approved by the Government Inspector. The standard of latrine accommodation should be raised to one seat for every 25 workers, and the provision of separate urinal accommodation should be insisted on. It should be prescribed that all doors of working rooms shall be hung so as to open readily from the inside outwards, in case of fire. I do not consider that further precautions for fencing machinery are necessary. Arrangements should be made to secure uniformity in the administration of the Factory Act throughout India. Full-time medical inspectors of factories are not necessary at present in Ahmedabad.

Oral evidence.

Mr. Doderet stated that he had been for five years in Ahmedabad, and had frequently inspected the mills. In 1903 he inspected 28 mills, in 1904, 25, and in 1905, 28 mills. There were 35 mills in 1905, and now there were 45, of which number 2, he thought, were lighted by electricity. The general hours of work were, in the cold weather, from 7 A.M. to 5-30 or 6 P.M.; in the hot weather from 5-30 A.M. to 7-30 P.M. and in the rains from 6 A.M. to 7 P.M. He did not consider the hot-weather hours unduly long, and did not think they were a strain on the work-people. In his opinion the hours of mill-hands compared favourably with those of work-people in outside employments. Mill labour was drawn from the *waghris*, *kolis*, *pardesis* and *dhers*. The dwelling-houses of these classes were close and confined, and if they compared the atmosphere of the mill with the atmosphere of these houses there would not be very much difference. Most of the Ahmedabad mills, too, were situated in open ground, and had plenty of space. Many of the mills, however, had been erected in recent years, and were built on modern lines. Speaking generally, the operatives lived in the vicinity of the mills. They had 8½ hours at home, and he considered this time enough, allowing for the classes from which they were taken, and what the people of their class did in other walks of life. If one allowed from seven to eight hours for sleep there was not much time left for other purposes, but cultivators worked equally long hours. There was further a great deal of labour in connection with the mills, and it was a very common sight in the hot weather to see people pulling heavy hand-carts all day long. He considered this harder work than that in the mills. Cultivators in the fields sometimes slept from 12 to 2 P.M., but owing to the scarcity of labour their long hours were continuous from day to day. With regard to mill-hands they might work 14 hours a day in the hot weather according to the clock, but that did not mean continuous work. It included half an hour allowed by law, and the frequent opportunities of going outside the mill. Witness thought there should be no restriction of adult male labour, because there was no restriction of such labour in other walks of life, and he did not think that the conditions of mill labour differed from the conditions of other employments. In his opinion the operatives could take care of themselves, and in Ahmedabad they were more or less masters of the situation. Since the famine in that district there had been a great scarcity of labour. Ten new mills had also been erected. The scarcity of labour applied equally to agriculture and mills. Strikes very often occurred to obtain higher wages, and the owners had to give in, otherwise other mills would snap the men up. Witness had not heard of the operatives of two mills combining in a strike. When the operatives left off work at night their demeanour was cheerful, and they did not look as if they had been fatigued. He had observed the men when leaving the mills frequently in the hot weather. Witness did not think it would be advisable to start earlier in the day in the hot weather in order to give the men a longer rest in the middle of the day. There would be no particular objection if the rest were made one hour about noon, but too long a rest would mean a loss to the mill. Assuming that a 12 hours' day was fixed, he agreed that the best way to utilise the surplus hours in the hot weather and rains would be by having a long interval in the middle of the day, but he did not for one moment support the proposed 12 hours' day. The reason

Mr. Doderet.

for the strikes was purely the wages question. Witness did not think that there was much difference between the huts, and the conditions of life generally, in the congested areas of the agricultural districts, and in the Ahmedabad mill districts. He thought that the mills were fairly well ventilated. The average working day at present might be 14 or 14½ hours, and he would not restrict working hours—even overtime hours. He considered the matter to be a question of contract. The operatives did not need to be protected against themselves, and they obtained plenty of holidays. If one visited the mills he saw that the men employed were generally men in the prime of life, and witness thought that the operatives left mill labour about the ages of 40 to 45. At that age their labour became of no use to the mill, and in the ordinary course of things they would leave the work before it became too arduous. It was also possible that they had saved money. The result of witness' observations, extending over a period of five years, was that the condition of the workers in the mills did not deteriorate on account of the hours they worked. Agricultural labourers had come into the city to work in the mills not only during famines, but also in times of plenty. The supply of agricultural labourers was deficient now in normal times. Witness did not think a class of "young persons" was required if they had physical examination of children before they commenced to work as half-timers, and if they adopted also the other suggestion to have another examination at 14 before they passed out as adults. He strongly advocated physical examination for children. Occasionally he had seen physically unfit children in the mills, and a physical test would also prevent diseased children from entering the mills. He had seen children working who had been certified as "between the ages of nine and fourteen," and who certainly looked under nine years of age. Witness considered the minimum age of nine for children suitable. Concerning education, Mr. Doderet did not think that the class from which these people came received, generally speaking, education, and there was no particular reason why mill-owners should be forced to provide it. To him there seemed no point in giving education to children who were going to work all their lives in a mill, and there was further the real and serious danger of the children being employed in the mill when nominally they should be at school. The rule of excluding non-working children with mothers should be made strict, with the exception of children in arms. Witness' general opinion was that the mills had arrangements for ventilation, but did not use them, and he was of opinion that proper ventilation should be insisted upon. He thought that the employment of females at night, except of those who had no children to look after at home, should be prohibited in mills, but not in ginning factories; and supposing the hours for adult males were fixed at 12, he saw no reason why similar hours should not be fixed for females. The latrine accommodation at present was not enough. The men fouled the compound outside, but it was not because the latrines themselves were filthy. Witness was of opinion that the inspection of the Ahmedabad mills was not sufficiently provided for. They had in theory two factory inspectors, but in reality they had only one man. The factory inspectors were Mr. Chambers, a technical inspector, and the City Magistrate who had to visit 10 out of the 43 mills. He was of opinion that it would be desirable to have full-time factory inspectors who would have no other duties; one technical inspector was not enough. It would be advisable to have two technical inspectors who could divide the work between them—one man inspecting the mills, and the other attending to the cotton excise. Witness thought that until the number of the mills had largely increased, a full-time medical inspecting officer was not necessary. If they had three or four medical inspectors for the Bombay Presidency, it would result, in his opinion, in delay in certifying ages, if they alone were entrusted with that work.

Witness No. 2.

Major Jackson, I. M. S., Civil Surgeon of Ahmedabad.

Major Jackson. *Written evidence.*

I have experience of cotton factory operatives. I cannot supply any statistics showing the relative healthiness of this class as compared with the general population of the same class. In Ahmedabad they do not seem to suffer from undue sickness, or from any specific disease. From general observation, I am of opinion that their physique is below that of the rural population of the same class. In determining age, the best practical criterion is the state of dentition, and the other signs of development. The dentition test alone cannot be relied on. I do not think that the existing laws regarding the employment of children are evaded to any considerable extent. I can give no statistical basis for my opinion. I am not in favour of the appointment of whole-time medical inspectors. The standard of latrine accommodation should be raised to one seat for every 25 workers, and in all cases where the septic tank system can be arranged for, it should be insisted on. I cannot say whether the physique of the workers has been affected by working long hours, but consider that the hours of work should be limited to 10½ hours a day. This could be arranged for in any of the various ways indicated in the question. I cannot say whether there has been physical deterioration on account of the working as adults of immature persons, but I am strongly of opinion that all children of 14 are not fit to be changed at once from half-timers to full-timers without a medical certificate. Until the age of 16 is reached, I would recommend an intermediate class who should not be employed as full-timers without a medical certificate. In any case, the special register proposed of all workers under 16 should be maintained. The employment of women at night should certainly be prohibited. It is difficult to reply regarding the minimum age for working children. Ordinarily, one would certainly say the age should be raised above 9, but if the age were raised it would mean that many children would not get enough to eat. The certifying surgeon should have power to prohibit the employment of a delicate child who, although within the prescribed age, is obviously unfit for work. Children should be employed only in regularly prescribed sets, except perhaps in ginning factories. Mill-owners, or the Government, should provide elementary education for half-timers. A rule should certainly be made prohibiting non-working young children from being admitted to dangerous or unhealthy parts of factories. This should be done by prohibiting the employment of mothers or others accompanied by such

children in such parts. An attempt should be made, in the manner suggested in the question, to fix a standard of purity for air in factories, so also for moisture, and for the purity of the water used for humidifying. The standard of latrine accommodation should be raised to one seat for every 25 workers, and separate urinals should be provided. Judging from the number of accident cases coming from factories, better provision for the fencing of machinery appears to be required. I think that uniformity in the working of the Act should be secured, if possible. All factory doors should be made to open outwards, folding back against the walls, so as to leave the side passages unobstructed. Nearly every mill that I am acquainted with requires a properly constructed approach road, and similarly a road, round the mill, and roads between different buildings. Millowners do not seem to think that such conveniences as roads are necessary. The consequence is that the amount of dust in mill compounds in the dry weather from the want of properly metalled roads is enormous, and the discomfort to operatives walking through such compounds during the monsoon months must be considerable. I would recommend that in all factory compounds a sufficient number of properly metalled roads be made compulsory, and further that the oiling of such roads be made compulsory so as to lessen the dust as much as possible. I am of opinion that before a factory is built, plans of the same should be submitted to and approved by some authority. This would obviate the building of badly ventilated factories. I would suggest the Collector, in consultation with the factory inspector and joint inspector, as the authority by whom plans should be passed. The flooring of factories leaves much to be desired. Some of the newer factories have fairly good floors, but in every case good sanitary floors should be insisted on. Major Jackson.

Witness stated that he had been in Ahmedabad since April last. He had previously had some experience of factories in Sind. He had inspected most of the factories in Ahmedabad, and in his opinion the operatives were not so robust as the rural population of that district. He had seen a few cases of phthisis among operatives employed in the mills, but the number was not out of proportion to the cases occurring among men in other employments. The children as a rule were equal to doing half-time work, though occasionally a child within the age limits was found who was perhaps unfit for even half-time work. He thought that a child of 16 should not be put on full-time without a certificate of fitness. Personally he had seen children of over 14 working as children, but in times of prosperity such children would have to do an adult's work. He considered that 10½ actual working hours was sufficient for a day's work. This he would attain by making the mill hours 12, with a mid-day interval of an hour, the remaining half hour to be made up of shorter intervals in the fore and after noons, say two intervals of a quarter of an hour each. For the age test he would suggest attention to teeth and development combined. The dentition test would not do alone. Children evidently unfit to work should be prohibited from so doing, and the medical officer should have power to reject a child on account of incapacity. If such children were employed outside, in open air employment, it would be better than working in the mills. He did not think there was much impersonation of children at Ahmedabad. The medical officer should check identification marks, if he did not write or enter them in his own hand. Witness did not see what benefit would come from a special medical inspecting officer though it might be better to have an officer who could carry his complaints direct to Government. At present complaints went to the Collector, who acted upon them, and witness knew of no cases where the orders had not been carried out. A full-time medical inspector, if not overworked, would acquire some useful information. Some of the latrines were not very good, but he would not describe them as very dirty. He thought the accommodation should be about one seat for every 25 workers, or at least one seat for some number between 25 and 50. Witness did not think that the average youth of from 14 to 16 was fit to work 12 hours a day. Such hours were too long. He might work three-quarters of the full time, say about 9 hours. He advocated raising the minimum age for children from 9 to 10, or even 11. He did not think such children would get anything else to do, if not admitted to mills till they were 10 or 11, and it was quite possible they would not get enough to eat if they were not n the factory. Children came for examination on two days in the week, or oftener, and the medical officer must be in the town for two or three days in the week to certify ages. A general medical inspecting officer could not attend to that work. Witness did all the certifying in Ahmedabad. He thought it better not to specify the nearest definite age in the age certificate, but to leave the wording as at present—"over 9 and under 14." He did not consider any particular part of a mill more unhealthy than another, and he saw no objection to children with mothers going into the rooms so long as they did not go near the machinery. Having due regard to the fact that the age for children was raised in 1891 from 7 to 9 years, he was still in favour of raising it by another year. He had no definite information regarding the average weight of adults in the Presidency. He adhered to his opinion that a child should not be employed in a mill at 9 years of age, even though the work was light. He did not mean to say that all children who came at 9 were unfit to work. The weaklings were only 1 or 2 *per cent.* He admitted that if the children were not in the mills they might not be able to earn enough to feed themselves properly. *Oral evidence.*

Witness No. 3.

Mr. Shorrock, of the Shorrock Spinning and Manufacturing Co., Ld., Ahmedabad.

The working hours of adult males should be limited; they should work from 6 A.M. to 6 P.M., with half an hour off between noon and 2 P.M. The engine should be stopped then. This should apply to all mills. To my knowledge there has been no physical deterioration requiring the creation by law of a special class of workers intermediate between the half-timer and the adult, and corresponding to "young persons" under the English Act. No change in the present system is required. I do not think it desirable that a special register of all workers under the age of 16 should be maintained in order to facilitate inquiries as to the physical fitness of the youngest adults to work full-time. The employment of women at night should be prohibited. The minimum age at which children are allowed to work in factories should not be raised beyond 9. Certificates of both age and physical fitness should be required before children are allowed to work in factories. No such certificates should be required before children who have worked half-time are allowed to work full-time as adults. It should be prescribed by law that children shall not be employed Mr. Shorrock. *Written evidence*

Mr. Shorrock.

except in regular sets. Factory owners should be obliged to provide elementary education at their own expense for children working in their factories. A rule should be made prohibiting non-working young children from accompanying workers to dangerous or unhealthy parts of factories. The workers should be prevented from bringing such children into the mill. An attempt should be made, by testing samples of air taken from factories in India, to prescribe an analytical standard of purity with a view to secure proper ventilation. A similar attempt should be made to prescribe a standard of moisture for the air in factories, with reference both to manufacturing processes and to the health of the workers. A standard of purity should be fixed for the water used for humidifying purposes. The standard of latrine accommodation should be raised to one seat for every 25 workers, and the provision of separate urinal accommodation should be insisted on. It should be prescribed that all doors of working rooms shall be hung so as to open readily from the inside outwards, in case of fire. No further precautions for fencing machinery are necessary. Arrangements should be made to secure uniformity in the administration of the Factory Act throughout India. Full-time medical inspectors of factories are not necessary. I can give no statistics showing the effect of working days of varying length on the production of the mill. The question of allowing half-timers to work in the mill for a short period prior to the examination for age and physical fitness depends on the district where the mill is situated. I do not approve the suggestion to have factory inspectors obtained from the United Kingdom, or trained there. Provisions of an elastic character are not required in any new factory law for India.

NOTE.—Mr Shorrock did not attend to give oral evidence.

WITNESS NO. 4.

Mr. Mangaldas G. Parekh, Ahmedabad.

Mr. Mangaldas G. Parekh. *Written evidence.*

I represent the Aryodaya and Rajnagar Spinning and Weaving Companies, the Bharatkhand Textile Manufacturing Company, the Victoria Mills, Bombay, a press and ginning factory at Viramgam, a ginning factory at Mehsana, and a press at Kalol. The mills employ :—

Men.	Women.	Children.	
193	86	100	Bharatkhand Mill.
1,246	80	200	Aryodaya Mill.
637	43	91	Rajnagar Mill.
635	376	93	Victoria Mill.

It would be difficult to say how often the mills work for longer than 12½ hours; but for the Aryodaya mill, where the hours are from sunrise to sunset, the average is about 12 hours, while for the Rajnagar mill, where there is an electric light installation, the hours are about one hour longer. Statements showing the hours of working for that mill are appended. The working hours of adult males should not be limited. They never work themselves to fatigue point, and rest frequently during working hours. Their hours are not really long, nor has their physique been affected. If the hours are to be limited, the working day might be fixed at 13 hours, from 6 A.M. to 7 P.M., with half an hour stoppage of the engine between noon and 2 P.M. It would be preferable, if hours are to be limited, to fix the maximum, leaving it to each employer to fix the time for beginning and ending work himself. The variations in the length of the days will in a great measure determine when a factory shall commence and cease work. No limit of hours should in any case be fixed for ginning factories or presses. It is not necessary to have a class of young persons in India, or to maintain a register of all workers under 16. In many cases the proportion of women and half-timers might determine the hours during which the machinery would run. If employers could get enough male adults, they would then work the mills solely with them. The number of persons who would probably be classed as young persons varies. say 100 in the Aryodaya mill and 50 in the Rajnagar mill. The maintenance of the register suggested would cause a good deal of work and lead to trouble and confusion. The employment of women at night should be prohibited, but ginning mills and presses should be exempt. The minimum age for children should not be increased. Certificates of age should be obtained within a fortnight or a month after beginning work, and medical officers should visit the mills once a fortnight or month for this purpose. Certificates of physical fitness are not necessary; no one would employ a child unfit for work. It is not necessary to examine a half-timer before allowing him or her to work as an adult, as the age can be calculated from the date of the half-time certificate, provided it is mentioned there. It is not necessary to prescribe that children must be employed in regular fixed sets only, because employers never have regular sets of half-timers in their factories if they employ child labour throughout the day. The provision of elementary education for children in factories is desirable, but should not be compulsory. It would be very harsh to prohibit the bringing in of non-working young children to factories. Many poor women are obliged to take their young children with them to the factory, having no means to provide for them otherwise while they are at work. Factory owners should endeavour, where possible, to prevent women from bringing their children with them to the mill. It would hardly be possible to fix uniform standards for air and humidity for so vast a country as India, the climatic conditions being so diverse It is to the interest of mill-owners to use pure water for their humidifying purposes in order that undue deterioration of their humidifying plant may be avoided. A law is not necessary to enforce this. In Ahmedabad the water is pure, being municipal water. It is not necessary to raise the standard of latrine accommodation, but millowners should be advised to have separate urinals, as this is to their own interest. New mills should have doors opening outwards, and this might be prescribed for mills now working, where possible. No further precautions for fencing machinery are required, because the factory inspectors see that all dangerous machinery is fenced. Arrangements should be made to secure uniformity in the administration of the Act throughout India. Full-time medical inspectors of factories are not required. Inspectors from the United Kingdom, or trained there, are not necessary. The present law is quite stringent enough, and it should be made more elastic. If the Government were to pass a law restricting the hours of work for labourers in factories (which ought not to be done) they will go against their policy of free trade. If the Government restrict the hours of work of the poor ignorant labouring classes in factories (which I believe is not simply with the idea of duty towards them) they should look to their needs as well, because, when these

labourers are ignorant in one sense, they will also be so in the other sense, as to their duty, for the simple reason that they don't work because they are made to work, and therefore if the hours of work are restricted they will go on working as they are at present doing, and as most of the factories pay on the piece-work system, their earnings will be less. They will also leave their work less fatigued and tired, and that too some time during daylight, and what will be the result? They will either indulge in liquor, or in gambling and kindred vices, which means they will lose their money and injure their health, and thus they will be double losers, nay more than double losers, for such habits will make them negligent in their work, and irregular attenders. Further, as payments of wages in factories are made after a month or a fortnight, those who will have the misfortune to be carried away by indulgence in vice will be short of money for necessaries, and will be obliged to borrow from unfeeling money-lenders, who not only charge very high interest, but also demand personal security in some shape or other for the money lent, all of which will not lead to any good results to the labourers, as the Government and some of my friends might be led to think, but it will be a source of revenue to the Government in some shape or other. If a law was to be passed that mills should not work for more than 12 to 13 hours a day, there should also be a law by which the employers can prevent the labourers going out of the mills and leaving their work so often and for so long a time as they are at present doing. If Government were so good as not to pass a law stopping the mills for half an hour between noon and 2 P.M., it would be to the interest of both parties concerned to stop the mills twice or thrice a day for a recess of more than 20 minutes, provided no workman is allowed to leave his work during working hours, except for urgent business; but I have no objection in the interest of the labourers if a law were to be passed that mills should not be worked for more than six hours actual work at a time, and that recess time should not be less than 30 minutes a day. There is no legislation in any country restricting the hours of adult labour; what there is in England is the result of trade-unions and not of legislation. It is much less needed in this country, as the workers here are far better off in the mills, where the atmosphere is purer than in their homes, and better than in the places where ordinary adults work outside, such as tailors, shoe-makers, blacksmiths, carpenters, bricklayers and many others. As long as legislation does not restrict the labour of these men, I fail to see why there should be legislation for those who work in mills, more especially as these mills are frequently visited by inspectors who see that all precautions are taken as to the supply of pure water, good ventilation, and clean privies, and where there is no damp and effluvia. If the mills were to work by electric light up to 8 P.M. as is done in many Bombay mills and only a few in Ahmedabad, the labourers would have full time for rest and meals after going to their homes, and besides it can be shown that though the mills were to work 14 hours a day, only about 9 hours' work is really done as the following figures will show :—

Mr. Mangaldas G. Parekh.

Spinning :—There is a process in the spinning department of mills known as "doffing," that is, removing full pirns from spindles and replacing them with empty ones.

Counts 21s :—
12 frames to a set.
8 doffs a day of 14 hours.
3½ minutes a doff
Actual work for 5½ hours.

Counts 30s :—
11 frames to a set.
14 doffs a day of 14 hours.
3½ minutes a doff.
Actual work for 9 hours.

Weaving :—
Average width of loom 40".
Calculated picks per minute 189.
Loss 5 *per cent.* for slippage = 180.
Calculated production of cloth 36" × 9 yards 2½ lbs. with 21s warp 30s weft and 80 *per cent.* size on warp, 48 reed and 48 pick = 87·5 yards a day of 14 hours
Loss 15 *per cent.* for re-shuttling, &c. = 74·4 yards.
@ 9 yards a cut, say 8 25 cuts.
@ 2½ lbs. a cut = 20 62 lbs.
Actual production per loom—about 14 lbs.

Loss :—23·8 yards = 6 62 lbs. = 4 hours 28 minutes.

Average number of hours worked from 1903 to 1907.

Serial No.	Month.	1903.	1904.	1905.	1906.	1907.
1	January	...	11·1	10 50	13·40	12 30
2	February	...	11 10	11 20	14·10	11·40
3	March	...	11·25	12·00	14·00	11 40
4	April	...	12 45	12·40	12·50	12·30
5	May	13·10	13·7		13 5	12 50
6	June	13·23	13·4	13·20	13 15	14·10
7	July	13·45	12·58	13·00	13·30	14·25
8	August	12 00	12 49	12·30	12 30	13·25
9	September	11·40	12·4	12·10	13 30	13·25
10	October	11·38	11 34	11·35	12·40	11·40
11	November	11·14	11·1	11 5	13·00	...
12	December	10 50	10·21	13·30	12·40	...

Mr. Mangaldás G. Parekh.

Serial No.	Months.	Number of days worked in each month from 1903 to 1907.					Number of days worked with electric light.		
		1903.	1904.	1905.	1906.	1907.	1905.	1906.	1907.
1	January . . .	...	27	26	27	27	...	26	27
2	February . .	...	25	24	24	23	...	25	14
3	March . . .	...	26	25	27	26	...	20	...
4	April . . .	...	26	26	25	26	...	1	...
5	May . . .	26	26	27	27	26	...	...	...
6	June . . .	26	26	26	26	25	...	...	12
7	July . . .	27	26	26	25	27	...	5	25
8	August . . .	26	27	26	27	26	...	...	21
9	September . .	26	25	26	25	26	...	15	22
10	October . . .	26	26	25	27	27	...	10	7
11	November . .	25	25	25	26	...	...	25	...
12	December . .	26	26	27	27	...	27	27	...
							27	154	125

Oral evidence.

Witness stated that he had had twelve years' experience in the industry. In his opinion the scarcity of labour was not very greatly felt, and the average skilfulness of the hands was about the same as it was a few years back. Adult male labour was somewhat scarce, and consequently they employed children, who were very useful in various departments. In 1905 he worked one of his mills for a few days by electric light. The hours were from 6 A.M. to 9 P.M., but the men did not work that period continuously, and hence they were not exhausted. Instead of spending all the time at their work, they loitered in the compound, smoking, eating, and so on, for 2 to 3 hours a day. He never received any complaints about the men being exhausted. They were paid extra for the overtime. When the questions from the Commission were received there was a general discussion among those interested in the industry. No one wanted legislation, but if it had to be, then a certain number of hours should be fixed *per* day. There might be two arrangements. Those who had electric light should have a 12-hour day, and those who had no light should work from sunrise to sunset. Employers would not object to shorter hours if the employés were made to devote themselves properly to their work during working hours. If women were allowed a 12-hours day, then the labour difficulty would be solved to a certain extent. Children had to pay the four-anna examination fee for their certificates. He thought that the Civil Surgeon should come to the mill for this purpose. In Bombay they called the certifying surgeon to the mill once a month. He had gins under his control, and except in the busy season they did not work after 8 o'clock at night. Mill-hands had not yet saved sufficient money to enable them to retire to their villages for the remainder of their days; the industry was too young for that. The men had never objected to work by electric light at night.

Witness No. 5.

Mr. Lalbhai Trikamlal, of the New Manekchok Spinning and Weaving Company, Limited, Ahmedabad.

Mr. Lalbhai Trikamlal. *Written evidence.*

The working hours of adult males should be limited. If the working hours are fixed from sunrise to sunset, which would very nearly come to an average of 12 hours, that will be suitable. The engine should stop for half an hour between noon and 2 P.M. When the shift system is in force in a factory, the only restriction necessary is that no adult male should be made to work for more than 12 hours out of every 24 hours. It is not necessary to have a class of young persons, and it would only be a burden to have a special register of all workers under 16. The present system is quite satisfactory It is not necessary to prohibit women from working at night, if that time comes with the permissible total working hours. The minimum age for children should not be raised. A certificate of age is sufficient; certificates of physical fitness are not required. To prescribe such a test would prevent them from working altogether, in case they proved unfit, and thereby their maintenance would suffer. Another examination prior to full-time employment should not be required if the first certificate shows the exact age of the child. The law as it stands at present is quite sufficient in the case of children, and requires no amendment. The provision of elementary education for children would lay an unnecessary strain upon their brains, and would take away their dearly-earned time for recreation. It is quite impossible to separate young non-working children from their parents, even temporarily, and women generally work at the winding and reeling machines which are not in any way dangerous. To prescribe an analytical standard of purity for air in factories is impossible in India. The residences of the operatives, and the atmosphere there, are more insanitary than the factories in which they work. If a standard of humidity is fixed suitable to the Indian climate, and if it proves satisfactory and works properly, we have no objection to its fixation. As municipal water is generally used by the factories, no standard of purity is necessary. The present standard of latrine accommodation is sufficient, and separate urinals are generally provided. We do not see any advantage in hanging factory doors so as to open readily from the inside outwards. No

further precautions for fencing machinery are necessary. It is impossible to secure uniformity in the administration of the Factory Act throughout India. Full-time medical inspectors of factories are not necessary. The mill employs 315 men, 115 women and 75 children. It commenced to work two years ago, and for 150 days in each year worked for more than 12½ hours. The average daily number of hours comes to about 12. Certificates of physical fitness are not necessary. It should be permissible to employ a child for a fortnight prior to the production of an age certificate. If the principle that half-timers should not be allowed to work full time until certified as physically fit be accepted, it will be very difficult to apply that principle in practice, because day by day the mill industry is increasing, and we find great difficulty in procuring work people; while this is the case, if we are stricter in such matters the industry will suffer and the work-people will be without any means of maintenance. No other kind of labour, less hard than mill labour, would be obtainable by them. Ginning factories should be allowed to work even at night, *i.e.*, for the whole 24 hours, with shifts, as the time for ginning cotton is very limited. Factory inspectors from England or inspectors trained there are not required. If the inspector be selected from the engineers or managers who have worked in the same districts where the inspector is to be appointed, it will be more satisfactory than if men were obtained from the United Kingdom. Inspectors should give at least three warnings before they put the law into effect. The working hours of males and females should be made the same with the same intervals for rest.

Mr. Lalbhai Trikamlal.

Witness stated that his Company had no electric light. They worked the daylight hours, and the operatives worked better, he found, in the short days. A man could work well up to 12 or 12½ hours, after which his work would fall off. Witness did not approve of long hours. If an operative were strong he could work 13 to 13½ hours without injuring his constitution. He preferred to employ adults, and any vacancies were filled by half-timers. He approved of the age certificate for children, but thought that the mill-owner should be permitted to employ the child for two weeks before obtaining the certificate This proposal would not lead to irregularities. He disapproved of the examination for physical fitness, but considered that an age certificate was necessary when a boy went from the half-timer to the adult stage. If the Civil Surgeon gave the exact age in the first instance, however, there would be no need to re-examine the half-timer before passing him as an adult. If the boy looked big and strong it was the custom to employ him as an adult without a certificate. Operatives earned good wages, but many were extravagant and spent a lot in drink. Electric light meant a great deal of waste, and he would not run his mill by it After receiving the questions prepared by the Commission, the mill-owners of Ahmedabad had a discussion, and the general opinion was that it was neither advantageous nor advisable to have electric light. Operatives worked better by daylight; they complained of the ill-effects of electric light on their eyes. The general opinion was in favour of working from sunrise to sunset, and if the fixed 12-hour day were introduced it would mean the introduction of electric light into all mills. Such an installation would cost him from Rs. 12,000 to Rs. 15,000. In the long hours the men become a little tired, but there was more production. If the hours were equalised throughout the year, the owners would lose more through having to put in electric light than they would gain by the steadier work of the men. Definite hours, if fixed for "young persons," would determine the working hours of the mill. Jobbers received a fixed monthly pay, and had to provide their own labour.

Oral evidence.

Witness No. 6.

Mr. W. Boughton Chambers, Acting 2nd Inspector of Factories, Ahmedabad.

The working hours of adult males should not be limited, provided that intervals for rest are allowed, and that a class of "young persons" (whose working hours would be restricted) is established. It is improbable that the physique of workers (adult males) has been affected by long hours. I consider that the hours for continuous working, *i.e.*, without ample time for food and rest, should be restricted. The engine should be stopped for 2 hours after each 6 hours' spell of continuous work in the long days, and for 1 hour in the short days, after the first spell, but for 2 hours after any subsequent period of 6 hours. It is most probable that there has been physical deterioration when children between the ages of 12 and 14, or perhaps up to a later age, have been worked as adults, and it would be advisable to create a class corresponding to "young persons" under the English Act. A register of workers under the age of 16 would be most valuable. Such a register should, however, be kept on an elaborate and comprehensive scale in the office of the local inspector, in large centres, and at a convenient place, such as the hospital or dispensary, in smaller ones. The employment of women at night should be unconditionally prohibited. I do not think the minimum age for working children should be raised. I consider it necessary that certificates of both age and physical fitness should be required before children are allowed to work in factories. If a class of "young persons" is not created, I am of opinion that no young person should be permitted to work as an adult unless certificates of age and physical fitness are produced. It would be better if "regular sets" for working children were fixed and defined by law. As it is, in many mills the system readily lends itself to the "time-cribbing abuse". I do not think that factory owners should be compelled to provide elementary education, or be responsible for it in any way. It is imperative that a rule be made to prohibit children (who are non-workers from entering any part of a factory containing machinery driven by power. The prohibition could be enforced by making the head of the department, in which the offence occurred, responsible by a special clause in the Act. Samples of air should be taken under all existing conditions of a day's working, and at various hours and seasons in order to fix a standard of purity, and thereby secure proper ventilation. Facilities should, however, be afforded for analysing such samples on the spot to save the delay that would occur in sending them to chemical examiners with Local Governments. It is essential that a standard of moisture should also be fixed, as also of purity of the water used for humidifying. The standard of latrine accommodation should be raised; separate urinal accommodation should be provided. It is most important that the doors of working rooms should be arranged to open

Mr. Chambers. *Written evidence.*

Chambers. outwards. Further precautions for fencing machinery are necessary under section 12 (*a*) and (*b*). There is also urgent need of a clause to include the prevention of accidents not actually connected with machinery, such as unprotected openings of upper storeys, openings in floors, leaking steam pipes, defective flooring and platforms, &c., which are at present quite unprovided for in the Act. Section 12 (*c*) could be amended to include such provisions.

It is most essential that uniformity in the administration of the Factory Act should be ensured throughout India. There is an urgent need of full-time medical inspectors of factories. There is no special system of recruitment or training for factory inspectors. It is probable the present system has not worked satisfactorily, mainly owing to an undermanned department in the technical branch, and to the want of amplification in the Act. As the conditions of the mill industry in India are, in a great measure, widely different from those prevailing at home, it is extremely doubtful if the recruitment of inspectors in the United Kingdom would be attended with as good results as the selection of intelligent and capable men in this country. So far the "all round" man has been necessary in Bombay. He has been forced to deal with every branch of mill inspection (which at home, are more or less specialised) and, besides, is an inspector under the Cotton Duties Act. An ordinary inspector from home would probably find that he had a good deal to learn to qualify himself in all branches. Doubtless it would be useful for the Indian inspector to gain some insight into English methods. A little indulgence in the matter of special leave on full pay for a few months to inspectors, in turn, would facilitate this, and be attended by the best results. The present inspection establishment is quite inadequate. Three more technical inspectors are required. The Presidency should be divided into districts and the staff distributed as follows:—

No. I District, Bombay Island, Thana and Poona, with head-quarters at Bombay—

1	Senior Inspector . . .	Rs.	500—700
1	Junior „ . . .	„	300—400

No. II District, Gujarat and Sind, head-quarters, Ahmedabad—

1	Senior Inspector . . .	Rs.	500—700
1	Junior „ . . .	„	300—400

No III District, Khandesh, Nasik, Sholapur, Ahmednagar and the Southern Mahratta country, head-quarters Jalgaon—

1	Senior Inspector . . .	Rs.	500—700
1	Junior „ . . .	„	300—400

The above are the technical inspectors. They should be liable to transfer from one district to another. This would conduce greatly to efficient and uniform working. In addition to the above a whole-time medical inspector in each district would be necessary as also an office establishment. The whole to be under the control of an "inspector general" or "superintending inspector" directly subordinate to the Department of Commerce and Industry. Whole-time medical inspectors are necessary. They could be assisted by Civil Surgeons of districts for the certification of children, in order to save inconvenience to factories by delays that might occur between the periodical visits of such whole-time medical inspectors. The medical inspectors should be retained specially for factory work, and should have had more or less practical experience in India. They should not necessarily be precluded from private practice. The present Factory Act requires amendment in several important respects. The want of definitions, for instance, frequently gives rise to quibbles and vexatious delays when cases are brought into Court. Section 12 (*a*) and (*b*) especially needs amplification. Such parts of machinery as are now generally recognised as dangerous to life and limb should be specified, and the onus of taking the initiative for securely fencing such machinery, or otherwise protecting operatives from risk, should lie on the occupier, or his duly authorised manager.

il evidence. Witness stated that he had not observed any ill effect upon the general health of the operatives due to long hours. Sometimes he had received complaints from operatives in the form of anonymous letters stating that they had been kept at work too long. As, however, women and children were not included in these complaints, he could do nothing. Witness thought that the number of working hours without food and refreshment should be restricted, and it would be advisable to close the mills in the hot weather in the middle of the day for 2 hours, and in the shorter days for less, between 11 and 2 P.M. There should be another good interval in the evening, after which operatives could work on into the night if desired. His suggestion was that after every six hours' work there should be a long interval. These long intervals would enable the men to take necessary rest, and would also enable the owners to keep their operatives under better control. It would be optional whether they worked to a later hour than at present every night. Witness insisted upon the engine stopping during the intervals devoted to rest. In his opinion his suggestion would work in practice as if a 12 hours' day were prescribed by law. This was better than fixing it by law, which would mean interfering with the liberty of the men, and might be resented. There were times when operatives had to work a little longer, when there was a big demand, for instance, and a large production was wanted. Witness had seen persons passed into the adult class who were unfit to do an adult's work. He would consider these persons unfit even for 12 hours' work. The youths in question were over 14, but they were unfit to do 12 hours' work. Generally the men were very independent, but at present this was accentuated as there was a scarcity of labour. He had not observed that the work-people had a preference for those mills that worked the longer hours. He objected to women working at night, and to their working in shifts, which system facilitated abuses which he found it impossible to check in actual practice. He had known cases of women going to a ginning factory after working all day in a mill. He would allow no woman to work after 8 P.M. Concerning the agriculturists who entered the mills, it was his opinion that they returned to their fields for short periods after having saved money in the mills. He had not observed that the mills which work 12 hours had a better supply of labour than the mills that worked 14 hours. He had not had that assertion brought prominently to his notice. Some mill managers, however, had told him that they had, and retained, good men, because their hours were not very long. If the hours were reduced to 12 he would not say whether it would mean a reduction in the actual wages earned. He had not noticed that the men were very much in the hands of the jobbers; it would be to the interest of the jobbers to have long hours, if extra money were paid to them on that account. The jobber was paid by the month, with a commission in some mills on the labourers he brought. He had not noticed any increase in the drinking habit among the workers. He could say nothing definite as to the healthiness of the mill.

operatives as compared with those in outside employments. The average child of 9 was able to do a half day's work, but a certificate of physical fitness as well as one of age should be required Witness had seen some cases of puny children who could hardly do the work to which they were put. Witness knew of no suitable outside employment which these children could undertake if they were not employed in the mills, but work in the open air was preferable to mill labour for such weaklings. The proportion of weaklings was, however, very small. There was also a very small proportion of adults who were unfit to do a full day's work. The transition stage from the child to the adult was where he had noticed this unfitness most. If the 12 hours' day were decided upon, he saw no objection to raising the hours of women to 12. In the hot weather, the excess of possible working hours over 12, if a general 12-hour day were fixed by law, should be taken in the middle of the day. Ginning factories did not generally come under the Act. There were many in and round Ahmedabad, and they should be subject to regulations. The hours here should be fixed at 12, and all extra work should be done by shifts. Some adults worked for 18 hours in these factories, and the usual day was from 14 to 15 hours. Ginning factories were generally in districts where the inspector seldom went. He had heard of no serious accidents in ginning mills in Ahmedabad, and had no personal experience of accidents to women working in front of the openers. If possible, a standard for the purity of air should be fixed and enforced. Many mills were badly ventilated, both through absence of air openings and by their wilful closure, where provided. The fixation of a standard of humidity was a difficult question, because the amount of humidity required. under the same external circumstances, varied in different mills. Some mills were gradually effecting improvements in this matter and in ventilation. The water used for humidifying came from the municipal supply; foul water ought not to be used. The present latrine accommodation was hardly adequate; but if the latrines were filthy, they must blame the Municipality. There were constant reports in the inspection books regarding this matter, but he could not say whether any steps were taken to force the Municipality to do their duty, and sanitate these latrines properly. If he personally made a complaint he followed it up to see that the evil was rectified. He recommended a compulsory septic tank system, such as the Advance Mills had. The present Factory Act was not specific enough in respect of several points. There were many loopholes. Personally, with reference to the provisions regarding fencing, he thought that the dangerous parts of machinery should be specified. He might call a particular part dangerous under section 12 (*c*) but in Court the defendant could call evidence to prove the contrary. He had had no actual cases in which the Court had refused to accept his advice. In several important respects, the fencing of machinery in Ahmedabad was not good. His orders were carried out after a great deal of trouble, but he considered this due more to indifference than wilfulness. In cases under section 17, if the occupier wished to discharge himself from the liability, it should be stipulated that he himself must produce in Court the person whom he alleges to be liable. Specific heads of departments, such as the spinning master, and so on, should be made responsible for particular defects. By the Local Government's rule under section 18 (*b*) operatives were allowed two gallons of water *per* day. The rule did not say whether the water was to be in reserve, or whether it would be a sufficient compliance with the Act if the supply were dependent upon the municipal supply, which in Bombay was cut off for several hours in the day. In Bombay the section was interpreted as requiring that the necessary amount of water should be in reserve when work was started in the morning. Operatives were frequently exposed to considerable risks through the crowding of machinery. A mill would be built for a certain number of machines, and then a few years later more machines would be put in. There were no regulations to provide against this. Under the holiday rules the men could now work some 10 to 12 days without a break. It should be imperative that every seventh day should be a closed day. He received from the mill-owners a list of closings for the ensuing month, but occasionally he did not receive notices of changes in time to see whether the mill really closed or not on the altered date. Witness promised to submit a written statement regarding the defects in the present Factory Act. His proportion of factory and excise work was about half and half. He advocated surprise visits in preference to the regular quarterly inspections. At present he could not pay as many casual visits as he would like to. He had 60 mills including 33 with weaving departments to look after. He joined the Factory Department in February 1906.

Mr. Chambers.

Witness No. 7.

Mr. F. F. Munshi, of the Gujarat Islam Match Manufacturing Company, Limited.

The working hours of adult males need not be limited, but they should not be allowed to work after 9 P.M. There is no effect on the health of adults by working long hours. The workers do not remain at work the whole day. Generally beween 8 and 11 A.M. all workmen take their food. The labourers here being of different castes, their food is brought from their houses by their wives and children. There is no fixed time for their dinner, but they take their food as it is brought, and thus more time is passed in taking food. Again, during the day they very often go out, and thus, besides half an hour stopping of the factory at noon, the labourers enjoy recess time from 1½ to 2 hours; so really speaking they work from 2 to 2½ hours less than outwardly appears. Therefore if the hours were limited, they would work less hours, and thus their wages will also be less, and they will not be able to supply themselves with proper food, and thus their state would be worse, which can be found out by comparing a workman in a village with a man working in a mill. If hours are to be fixed at all, they must be fixed according to the season; in the hot weather when the day is long, the working hours should be 13 to 14, and in winter, when the day is short, the hours should be 12. For the enforcement of this restriction the factory inspector should pay sudden visits, at the closing and beginning time, so that if any factory works beyond the fixed time this will be found out. The legal working hours should be from sunrise to sunset, and the hours should be fixed accordingly. The engine should be stopped between noon and 2 P.M. for half an hour. As already stated, the working hours should be according to season, because in winter at 5 A.M. it remains quite dark, and it will be impossible for labourers to be present at 5 A.M. in the factory, unless they get up at 4 A.M., and it is not proper that the labourers should come in such darkness to the factory. Half-timers should

Mr. Munshi. *Written evidence*

r. Munshi.

be between 9 and 14 years, and above 14 they should work full-time. There is no necessity for creating a class called "young persons". It may be advisable to keep a register of all workers under 16 as an experiment, for a limited period, and if it is found necessary, then it may be prescribed for the future. Women should not be allowed to work at all at night in factories. The present age limit for children is quite proper. Only an age certificate should be required, and not one of physical fitness. If the certificate of physical fitness be required many children will be without employment and they would wander here and there at their houses, and not learn any work which would be useful to them to maintain themselves later on in life There is no necessity for another certificate of age prior to the employment, as an adult, of a half-timer, because this can be known from the first certificate which has been given to a child at the time of his first being certified. The present system for the employment of children in sets is quite sufficient. Factory owners should not be obliged to provide elementary education for children; if that be done by Government, it will be more effective A rule should be made prohibiting non-working young children from accompanying the workers to dangerous or unhealthy parts of factories, and if non-working young children be found with workers in such places, the immediate superiors of these workers should be fined. I wish to say that, as regards ventilation and sanitation, the factory should be inspected by the Civil Surgeon, and if he finds that the factory does not contain pure air, or proper ventilation, or a proper arrangement for urinals and latrines, he should make suggestions, and his suggestions should be carried out by the owner. I do not see any necessity for making the doors of all factories open readily outwards The precautions taken at present are sufficient for fencing machinery in my factory. The present inspectors are sufficient for the work, and full-time medical inspectors are not required.

l evidence.

Witness stated that his factory was established ten years ago, and he had 225 operatives. They worked from sunrise to sunset, and there was no electric light These hours were worked all the year round. He employed 30 boys and from 8 to 10 girls. They filled the boxes with matches. There were no special rules laid down by Government for sanitation, ventilation, etc, in match factories All doors and windows were kept open. He used both yellow and amorphous phosphorus in the manufacture of matches. The mixing, dipping, and drying were all carried out in separate rooms. The mixing was done in an open shed, and the drying in drying chambers apart from the main building, which had no communication with the other parts of that building. The mixing was done in a closed apparatus. The dipping also was carried out in an open shed. In this shed he had no fans with which to draw away the air from above the dipping tables, but there was a chimney which acted as a ventilator. The matches were dried before being taken to the box room. He kept the phosphorus in water, and the phosphorus paste was used at once. The paste would not keep, and so fresh paste was made when necessary. The civil surgeon and inspectors inspected the teeth of the workers. He had no special dentist. No persons with decayed teeth had come to be employed and there had been no cases of necrosis. Witness paid his employés higher wages than they would earn in a cotton factory. The children earned about four annas a day and the adults from six to seven annas. Some adults were, however, on piece work. He himself mixed the phosphorus. It was prepared twice a day, and he kept nothing in stock. The factory turned out 600 gross of boxes a day. They were sulphur matches. He provided soap for the operatives, but there were no special washing arrangements. He had had no big fires and no bad accidents The doors of the building were swinging doors. Witness did not think that the working hours should be restricted, although they ought not to be allowed to work after 9 P.M. In his opinion the adult man could do 13 hours of actual work without injury to his health. He did not allow night work. He considered that for his factory the ordinary rules regarding the employment of half-timers should be relaxed, so that the children could be employed for longer hours. It was very light work.

Witness No. 8.

Mr. N. R. Divecha of the Jehangir Vakil Mills, Ahmedabad.

Divecha.
ten evidence.

The mill was started about 2 months ago, and is not yet fully open. We employ 250 males, 45 to 50 females and 20 boys and girls. The hours of working adults should in my opinion be limited. The Indian mill operative works very leisurely; he never works at full pressure for more than an hour or two at a stretch; and spends a good deal of time smoking, taking food and in other ways. For this reason, I do not think that the hands are so hard worked as to deteriorate physically. I suggest that the hours should be 12½ a day, from 6 A.M. to 6-30 P.M., and that the engine should be stopped for half an hour between noon and 2 P.M. The imposition of definite time limits for work would be the best method of enforcing a limitation of hours. I do not think that there has been physical deterioration requiring the creation by law of a class of young persons. Nor do I consider that the maintenance of a special register for all workers under 16 is desirable. Women should be prohibited from working at night in factories working all the year round. The minimum age for children should not be raised. Certificates of age and physical fitness should not be required prior to the employment of children in a factory. If certificates be insisted on, then a week to fifteen days should be allowed, during which the child might work, prior to the examination for a certificate The only feasible way to secure the medical examination of half-timers with reasonable despatch would be for the certifying authority to visit the mills periodically and to grant certificates then. Certificates of age and fitness should not be required before a half-timer is permitted to work as an adult. That is impracticable. It should be prescribed by law that children should not be permitted to work save in regular sets. I am opposed to the creation by law of a class of "young persons". This would handicap the mills. At present the proportion of females and half-timers to adult males is about 2 to 7. If a number of young persons are thrown in along with the former, it would be impossible to work a mill fully, and to the best economy. We have about 35 young persons against 200 adult males. Factory owners should not be obliged to provide elementary education for their half-timers at their own expense.

A rule prohibiting young. non-working children from being brought to the factory would entail hardship on young mothers. As women are chiefly employed on reeling, or winding, or such light work, they are not likely to work in a dangerous or unhealthy part of a factory. The only result of enforcing the prohibition would be to prevent such females from earning their living in a mill. If discretion is left to the factory inspectors to prohibit children from being brought into such places as are in his opinion dangerous or unhealthy, that would be sufficient. An attempt should be made to fix a standard of purity for air in factories. No similar attempt should be made to fix a hygrometric standard. In India, for more than eight months in the year, the air is so dry that it is impossible for owners to obtain such an amount of humidity as would be injurious to the health of the workers. A standard of purity should be fixed for the water used for humidifying purposes. The standard of latrine accommodation need not be raised. It is sufficient, as the workers go out when they like. A separate urinal is necessary in the case of ordinary latrines, but for those provided with septic tank arrangements, no separate urinal would be required. All doors should be hung so as to open outwards. The present rules and regulations regarding fencing are sufficient. I think it is impracticable to attempt to secure uniformity in the administration of the Act throughout India. Full-time medical inspectors are not, I think, required. The present arrangement is sufficiently good. I do not approve the suggestion to bring out factory inspectors from the United Kingdom. Men conversant with the peculiar habits and customs of the people would be preferable to those trained in England, who would be liable to judge of circumstances here by an English standard. Any law, more stringent than the present law, should have provisions of an elastic character. In the absence of definite information as to the nature of the restrictions to be imposed, I have no suggestions to make. Mr Divecha.

Oral evidence.

The witness supported the twelve and a half hours' day, with half an hour off at noon. The men now were over-worked, and the long hours in the hot season were a heavy strain on them. Towards 5 and 6 o'clock their work began to fall off. Still he did not think their physique suffered In preference to sunrise to sunset, he would adopt 12½ hours all the year round. This would hardly affect the supply of operatives, as, however much they paid them, they could not get a sufficient number of hands. Witness did not like night shifts The creation of a new class of young persons was impracticable. Children were not over-worked, and did not require further protection, and they had plenty of time off. If they created this class the mill would stop at the hour fixed by law for "young persons". If the age of half-timers were raised to 16 it would be a hardship to employers, who would have to increase the number of hands while the labour supply was inadequate. Owners would have to stop part of their mills, if not the whole mill. Witness did not agree with giving more time off for women in the middle of the day; their present time was sufficient. He did not agree that employers could be more strict with the men if the hours were reduced. Owing to the hours now wasted, the employers had to employ more hands.' Men would leave one mill and go to another, where they had to work longer hours, but secured more money. Eighteen new mills were being or had recently been erected in Ahmedabad; this meant from ten to fifteen thousand spindles *per* mill. The old mills had also added spindles, which made a total of about 250,000 new spindles and probably about 6,000 looms. Hands were continually changing. Out of 450 one year only 50 remained in the mill during the second year. Witness used fans for ventilation, and believed in attempting to fix a standard of humidity. He did not see what use a certificate of physical fitness would be in the case of children or half-timers; employers would not engage sickly operatives in their own interests He thought half-timers should be educated; but that was primarily the business of the Government or of the Municipality. But witness deprecated the establishment of schools in the mill compounds; that might lead to unscrupulous employers working children longer than the law allowed.

Witness No. 9.

Mr. Mansukhbhai Bhagubhai, Ahmedabad.

Mr. Mansukhbhai Bhagubhai. *Written evidence.*

I represent the Guzarat Ginning and Manufacturing Company, Limited, employing—

Men.	Women.	Children.
1,295	86	42

The Guzarat Spinning and Weaving Company, Limited, employing—

Men.	Women.	Children.
816	55	70

The Motilal Hirabhai Spinning, Weaving and Manufacturing Company, Limited, employing—

Men.	Women.	Children.
1,105	79	88

The Purshotam Spinning and Manufacturing Company, Limited, employing—

Men.	Women.	Children.
439	30	35

A certificate of physical fitness for children is not necessary, and it should be permissible to employ a child for one week in anticipation of its obtaining a certificate of age. The principle that half-timers should be certified fit for full-time work before being so employed cannot be applied in practice, as there would be a great scarcity of labour. There can be no safeguard to prevent such persons getting employment in other mills. It is not necessary that a class of young persons should be created. If such a class is created, the effect on the factories will be bad. The number of working women, half-timers and young persons will be great, and as they work with adults it would hamper the working of factories to creat such a class. I cannot give the number of "young persons" working in my factories. The Act and the rules should not apply to ginning factories, as

r. Mansukhbhai Bhaghbhai.

they can be worked only for 3 or 4 months in a year. If they are not allowed to work as now, the farmers would suffer greatly as their cotton would be unginned before the monsoon. Professional men thoroughly acquainted with Indian factories, and not men recruited from or trained in the United Kingdom, should be appointed as inspectors. The Act should be made more elastic. It may be added that in case of finding any breach of the rules, the owners of factories should be warned once or twice before any steps are taken against them; and if any steps are to be taken then before doing so a written explanation should be obtained. This would avoid much misunderstanding and facilitate work. The working hours of adults should be limited. The physique of the labourers, though they apparently work for long hours, is not in the least affected thereby. The system of working in India is such that the labourers go out at frequent intervals for a temporary rest. Therefore, though they are said to work long hours, practically none of the labourers work for the full time the factory is running. If hours are to be limited, their number should be fixed at 12. The best method of enforcing the restriction would be to fix the legal working hours from 7 A.M. to 7-30 P.M., except when the factory works by shifts. The engine should be stopped for half an hour between noon and 2 P.M. When a factory is working by the shift system, the only restriction which ought to be imposed is that no adult should be made to work for more than 12 hours out of the 24. If the time fixed for work is limited to 12 hours only, there would be no necessity to make any change in the period fixed for the working of persons between 12 and 14 years of age, as the system of working in India is as described above. No register of all operatives under 16 years is required. It is not necessary to prohibit women from working at night, if the night hours form part of the legitimate working hours of a factory. The minimum age for children should not be raised beyond 9 because the half-timer practically never works for the full prescribed period of 7 hours. Generally, the boys whose work it is to doff the machines get an interval after one doffing is over, and they are then allowed to go out of the factory. Certificates of age for children appear necessary, and should be enforced, but the enforcement of the certificate of physical fitness will do a lot of harm. In case a child proved physically unfit for working in the factory, it is hardly possible in India for him to get any lighter work so as to enable him to earn an equal amount of wages, and consequently he will be indirectly compelled to work harder. A second examination for age prior to the employment of a half-timer as an adult will not be required if the certificate issued after the first examination shows the exact age of the boy passed. It used to be the custom to show the exact age. It should not be prescribed by law that children shall not be employed except in regular sets, because by the adoption of this course a child who fails to attend either in the morning or in the evening in time to work in his regular set would lose his wages for the day, and his maintenance would suffer, whereas under the present practice a child, who unfortunately fails to attend in the morning, may be employed in the evening, and thus could earn his wages for the day. The provision of elementary education for children would throw an unnecessary additional burden on them, and would devour their dearly earned time for recreation without any purpose. It is quite impossible to separate young babies from their parents even temporarily, there being usually no arrangement practicable under which the babies could stay under somebody's care. Attempts may be made to fix a standard of purity for air, and possible remedies for bad ventilation may be shown to the mill-owners, but there should be nothing like a penalty prescribed. If a standard of humidity is fixed in perfect accordance with the Indian climate, and if we are allowed enough moisture to work properly, we have no objection. As municipal water is generally used by the factory owners, there is no need to fix a standard of purity for the water used for humidifying purposes. The present standard of latrine accommodation is never found defective and urinals are generally separately provided. All factory doors should be hung so as to open readily outwards. No further precautions for fencing are required. The administration of the Act should be made uniform throughout India. Full-time medical inspectors are not necessary.

NOTE.—The witness did not attend to give oral evidence; see, however, the oral evidence of Mr. Devshanker Bhaishanker Dave, below.

WITNESS No. 10.

Mr. Devshanker Bhaishanker Dave, manager of the Gujarat Ginning and Manufacturing Company and the Motilal Hirabhai Spinning, Weaving and Manufacturing Company, Limited, Ahmedabad.

Mr. Devshanker Bhaishanker Dave. *Oral evidence.*

Witness stated that the written evidence submitted by the proprietor of the mills, Mr. Mansukhbhai Bhagubhai, had been drafted by the witness, and also represented his (witness') views. He had been in the industry for 11 years as a manager. Four years ago his firm took over a mill which had an electric light installation, and during one season they worked up to 9 P.M. The operatives then objected and complained of the long hours, and so they stopped working by the aid of artificial light. His experience was that one month's working by electric light increased the production by nearly a day or a day and a half. The electric light was only in the weaving department of that particular mill. In his opinion the health of children was not injured by mill labour, and it was not the custom of parents to send their children to work in order that they, the parents, might live on the wages so earned. If the adult working day was to be restricted, he would prefer a 12 hours' day because operatives could not work continuously for a longer period. He stated that in the mills no one worked continuously, and even if longer intervals were decided upon, he doubted whether they could compel the men to work the proper working hours. There would not, too, be sufficient space in the compound to allow of them taking their meals all at the same time. Operatives did not work for the full nominal working day, and 10 *per cent.* of them were always out. Witness thought that it would be impossible to enforce a stricter standard of discipline in the near future, even with restricted hours. He himself favoured an average 12½ hours' day throughout the year, including the rest interval. It would not be convenient for the operatives to go out all at once into the compound for dinner, as on account of the caste system a very big compound would be necessary for that. The midday interval was only used for taking rest, and he thought that if the men were given a longer interval in order to go home many of them would not return to work. The adult hands were very independent, and only attended because

they wanted their wages. As a class mill operatives were becoming more skilful in their work. He could see a distinct improvement. There was better work now than ten years ago, but there had been no increase in production. The operatives were still very casual, and would not stick to their work. He found 10 *per cent.* of passes enough in practice. Half of the operatives took from 2 to 3 days' holiday *per* month, in addition to the regular holidays. After allowing 2 hours a day for legitimate stoppages in each loom, witness calculated that he only obtained 60 *per cent.* of the total daily capacity of the looms. The reason for the shortage was that the operatives insisted on going away at frequent intervals, and no one was left to mind the loom. If children were not employed in the mill, they would be doing harder work elsewhere. If a boy were weak he would not do the same amount of work as a sharper and stronger boy could perform. There might be some boys employed who were unable to do the work for which they were paid. He could not obtain the services of a sufficient number of thoroughly fit and suitable boys, and so took on all who came to make up the number for each room, and prevent grumbling on the part of the jobbers and doffers. There was a general scarcity of labour—men, women and boys. A very small percentage of boys were rejected by the doctor. If a boy failed to pass, he had to pay his own examination fee. He paid in any case. In some cases a boy was kept at work in the mill for two days before going to the doctor, and if he failed to pass, then the mill retained his earnings, which were debited against the four annas medical fee. It was the duty of the doffing jobbers to provide 12 boys to look after the 12 machines, and the jobbers were responsible for the payment of the examination fee. In Ahmedabad half timers were not allowed to work full time without a second certificate. Women were not generally employed owing to the restriction of their hours of work. If the hours of labour were restricted to 12 for male adults, he agreed that the hours for women might be increased to that number. This would be a great help and the scarcity of adult labour would not be so greatly felt. Women would not, however, be able to retain their present long interval of 1½ hours, otherwise the proposal would not meet the case. The scarcity of labour was partly due to the demand created by the new mills, and also was a result of plague and famine. In his opinion some of the operatives were saving money. Others, however, spent all their wages on dress and luxuries. These latter were chiefly Muhammadans. Tea drinking before commencing work was general, but he did not allow tea-vendors to enter the mill departments. The *khonbi* weavers were saving money, as well as the *dhers*, but the mill industry had not been a sufficiently long time in existence for any of the workers to retire on their savings. The operatives became used to the mill atmosphere, and as a class they were hardy and strong. Their health did not deteriorate through working in mills. He objected to the physical fitness test, because there would be no regular standard and because mill work was less laborious than outside employments. If a boy were really unable to work he would not be employed, because it was not profitable to the employer to keep unfit boys. Parents could not keep their children between the ages of 9 and 14; it was necessary that the children should earn some wages. Witness did not advocate fixed hours all the year round, because it meant the introduction of artificial light. A working day of half an hour less in the long days would not be any great harm. In the event of fixed hours being decided upon, he thought that the industry would adapt itself to the new conditions, after a time, without much loss. The hours fixed for the proposed new class of young persons would determine the working hours of the mill. The caste objections were such that the present system of taking meals in the mills could not be altered. He obtained his jobbers from other mills. He used pure municipal water in the humidifier. The water from the condenser was brought back to the tank by an open channel.

Mr. Devshanker Bhaishanker Dave.

Witness No. 11.

Mr. Dadabhai Nasarvanji Nanavati, City Magistrate of Ahmedabad.

Witness said he had been for six years in Ahmedabad, and was an *ex-officio* inspector of the mills. He visited 8 or 9 mills a quarter, and about 35 mills a year. He had observed the health of the operatives in the mills, and in his opinion they appeared more weakly than labourers in outside employments. He referred to the operatives generally, and not to any particular class. Witness attributed this condition of health to the long hours the operatives had to work, and he thought there ought to be a restriction on the hours of adult labour in mills. The men should not be made to work more than ten hours a day, that was to say, actual working hours. Witness had seen children at work who were incapable of carrying out their duties; some were very small children, quite unfit to do the work required. The rules regarding half-timers were not generally observed. There were eight or ten prosecutions a year, and in almost all cases the responsibility was cast upon a subordinate officer, the agent consequently escaping. In the course of his inspection of the mills he saw the age certificates of the children, and inspected the sanitary arrangements. He then made his remarks in the visiting book. The remarks were forwarded to the Collector, and generally they were attended to. If he reported that the latrines were dirty, the mills would take action. The Municipality was responsible, but sometimes the mills did the work themselves. Personally he saw no reason to complain about the sanitary arrangements of the mills. Witness gave it as his opinion that the health of the mill operatives was declining. He had observed the matter closely and saw a change for the worse in their health. Occasionally he had found uncertified boys on the mill premises. They made excuses, and said they were there for some purpose or another. Their names were not on the register, but on the whole the registers were well kept. Witness also had found that the books were kept up to date. In his opinion the approximate time spent by male adults outside the mill amounted to an hour or so a day, excluding the half hour interval. Ten hours' standing by the machines was, if anything, too much, and an interval of one hour would be better than half an hour. Witness thought that pulling hand-carts about the place all day long was more laborious than mill labour. If the operatives had an hour's interval at midday in the hot weather, they would employ it in recreation, and even if they had two hours they would not go home. Witness had seen children physically unfit for work, but could not suggest more suitable employment for such children, assuming that they were not allowed in mills. They might be able to obtain outside work, which would, as such, be generally preferable to mill labour. Witness

Mr. Nanavati. *Oral evidence.*

Nanavati.

considered field labour much more easy than mill labour. There was much drunkenness amongst mill-hands in Ahmedabad The operatives said drink was necessary after the day's work was over. This general drunkenness may have helped to pull down their health, but chiefly it was due to the long hours worked. There was more drunkenness among mill-hands than among those in outside employments. One reason was that they were better paid, and another was that they required some kind of stimulant to keep up their strength He knew of no cases of opium eating. The difference between mill and agricultural labour was that the latter was in the open air, and the former entailed standing in a painful position for a long time in a bad atmosphere. Hand-loom weavers performed their work at their houses and at their ease. They were more healthy than those who worked in mills. In witness' opinion it was more unhealthy to work in the mills in the hot weather than in the open air under a burning sun. Personally he thought that the ages of children should be raised from 9 to 12. Easy work might be given them before they reached 12, but not mill work. Work in the mills varied, and the children had the lightest work.

NOTE.—The witness did not prepare any written evidence

WITNESS NO. 12.

Mr. Lalbhai Dalpatbhai, of the Saraspur Manufacturing Company and the Raipur Manufacturing Company, Limited, Ahmedabad.

Lalbhai Dalpatbhai. *Written evidence.*

I do not think that the working hours of adult males need be limited. They never work so that they get tired out. The work of Indian labourers differs a great deal from that of European labourers. They go out many times in a day, and you will notice large groups of people collected from time to time in the *bidikhana*. This is their habit, and can't be prevented. Their constitution is not at all affected by the so-called long hours. Their physique suffers more from liquor shops, which they invariably frequent on holidays. If hours must be limited there should be a limit of from sunrise to sunset, or an average of 12½ working hours. In winter days the working hours come to 11 only, while in summer they are nearly 13½ hours, and by keeping the limit from sunrise to sunset fair average working hours are obtained. There would be no difficulty in having he law imposing this limit observed by the peace-loving Indian community; but the chief consideration would be that any enactment should not cripple industries just coming into existence. The engine should be stopped for half an hour at midday. When there are day shifts, there should be no limitations. For reasons stated above such would greatly cripple the industry. It is not at all necessary to have a class of young persons. There has been no physical deterioration, as our managers are strict in employing children as half-timers only. A special register of all workers under 16 is not necessary, as it would unnecessarily increase the already heavy work without corresponding good. Women should not work after 8 o'clock at night· until then there is no harm. The minimum age for children should not be raised. It would be hard to take away this means of livelihood without doing them any good. Certificates of age and physical fitness are not necessary. Age is arrived at by physical appearances, and no further enactment is necessary. Certificates prior to the employment of half-timers as adults are not required, as the age of fitness for full-time work can be calculated from the date of half-time certificate where the age should be mentioned. We have sets of half-timers, and no further instructions as to regular sets are necessary Provision for preliminary education of children employed in factories is very desirable, but should not be made compulsory. A rule preventing young non-working children from entering factories would press very hardly, as many poor women take their young children with them, having no means of leaving the child at home. Such an enactment would keep away such persons from work and reduce them to misery. It would be impossible to fix a standard of purity of air or of humidity for such a large country as India, as there is a very great difference of climatic conditions. For instance, here we have a very dry climate as compared with Bombay. The humidity used in spinning and weaving is not so excessive as to be injurious to operatives. It does not equal the monsoon moisture, and we stop all artificial means of humidifying in the monsoon No standard of purity need be fixed for the water used for humidifying. Here municipal main water is used for humidifying purposes. It is in the interest of the mill-owners to use good water so that their humidifying plant may not suffer. It is not necessary to raise the standard of latrine accommodation; separate urinals should be insisted on. It would be advisable that all main doors should readily open from the inside outwards, and this should be enforced where feasible. At present all machinery is properly fenced. The administration of the Act should be uniform throughout India Full-time medical inspectors are not necessary. If any are appointed it would be very desirable to appoint such as have lived in India and are conversant with Indian life and conditions of work. In the Saraspur Manufacturing Company, Limited, there are about 836 men, 101 women and 165 children. The Raipur Manufacturing Company, Limited, will start work shortly. In the summer days in each year the factory works somewhat over 13 hours, and in winter about 11 hours. The average for the whole year would come to nearly 12½ hours. In March 1905 the factory worked with electric light for about 3 months up to 8-30 P.M., but it was latterly stopped as it did not suit some of the hands. Sometimes on account of press of work the certificate books for children are not returned for 10 to 12 days; so at least three weeks should be allowed for obtaining a child's certificate after he or she begins work in a factory. If a class of young persons be created, the hours of work will be shortened. The proportion of women, half-timers, and young persons, will determine the hours the mill will work, and by shortening the hours decrease the wages of the male adults, diminish the outturn, and altogether cripple the industry. The hands will be ruined, as much of the work is piece work. There are about 60 to 70 such young persons in our factory. If a limit must be placed on the hours of adult labour, it will be preferable to fix a maximum number of hours, leaving it to the owner to fix the commencement and termination of the day's work. Ginning factories should be allowed to work with adults and women at night, with shifts, as the season for working is always very short It is very necessary that factory inspectors should be recruited in India as they will then be thoroughly conversant with Indian life and labour. Home training is not at all necessary for an efficient factory inspector in India on account of the very varying conditions

in the two countries. The present law is stringent enough, and if it were made more stringent it will cripple industries just starting and might have far-reaching results detrimental to the poorer classes for whose benefit it is intended. Mr Lalbhai Dalpbhai.

Witness stated that his mill had electric light, but he had to stop using it because the men complained of long hours. Also he did not consider it profitable in the long run. This was his opinion after three months' trial. The quality of the output deteriorated, and there was one *per cent.* more waste as compared with daylight working. He had prepared a statement showing the production *per* hour *per* spindle of 20s. For 11 hours the figure was ·47, for 12 hours 25 minutes 49, and for 13 hours, ·43. He had no figures showing the proportionate amount of waste, but he thought that the waste would increase a little as the hours of work increased. Questioned as to the drop in the output in the 13 hours' day, compared with the 12 hours, witness stated that there were many factors which affected production, namely, the mixing of the cotton, the attendance of the hands, and the humidity. It was not solely the hours which determined production. In his opinion the average production *per* hour would be less in the long run for long hours. He would have no restriction of adult labour, but he did not think working by electric light desirable. The hands were independent, and pleased themselves concerning the length of the hours they worked. The hands were able to express their views in a very definite way, and there had been strikes in Ahmedabad. In his opinion it would not be possible to work economically without the help of children, and the hours of the mill would be the hours fixed for the "young persons" if such a class were created. Ten *per cent.* of the adults would come within the class of "young persons." They were in different departments, and the proposal, if adopted, would disorganise the working of the mill. They did not employ children without the certificate of age. To this he had no objection, but he considered a certificate of physical fitness unnecessary. If a child were refused work on account of health he would have to do outside work, as hard or harder than the work in the mills. Witness had 94 ring frames and 94 doffing boys, though a few of these were adults. There were gangs of 13 boys to 13 machines, and they worked for 52 minutes out of 90 minutes. This meant 3½ hours of actual work out of the 7 hours. The boys received Rs. 5 *per* month, and the adult doffing boys of from 14 to 16 years of age drew about Rs. 8 *per* month. If there had to be a limitation of adult working hours, he approved of a day from sunrise to sunset. He did not think that a long interval at midday in the hot weather would be of use, nor would the operatives employ a special interval about 9 o'clock in the morning for eating their meals He himself tried the early morning half hour, but the men would not adhere to it, as often their food had not arrived in time. He had a ginning factory, but it ran with the mill. He had no experience of other gins. Witness stated that he had some landed estates, and the condition of the cultivators on them was worse than that of the mill labourers both as regards wages and general conditions. The agricultural labourers also were of poor physique. The children in the villages, too, were not stronger than the children in the mills, being often in want of food. *Oral evidence.*

Witness No. 13.

Mr. C. Knowles, manager of the Ahmedabad Merchants' Spinning Mills Company, Limited.

Mr. Knowles. *Written evidence.*

I am manager of the Ahmedabad Merchants' Mills Company and the Nadiad Swadeshi Mills; the latter is still under construction. The number of hands employed in the Ahmedabad Merchants' Mills is as follows :—

420 males.
86 females.
127 children (male).
21 „ (female).

The Merchants' Mill has been working for nearly six years, and works on an average about 12½ hours a day, for about five months in each year, *i. e.* in the longer days we work about 13½ hours a day. I am sorry I cannot give statistics showing the variation in production for different lengths of working hours, but we find in the long days a greater production than in the short days fully in proportion to the extra hours worked. The Indian labourer is entirely of a different type from the labourer we find in England; he is very careless, independent and irregular, and spends much of his time loafing about the mill compound—smoking, talking, washing his teeth, and so on. This commences from the time he arrives up to the time of his departure. I allow in my mill pass-out tickets to the work-people, which allow fully 10 *per cent.* of them to be outside throughout the day. The labourer takes his food between 8-30 A.M. and 10 A.M. After that time very few are to be seen dining, and I should like to suggest that instead of the present noon recess from 12 to 12-30 P. M., the recess should be from 9 to 9-30 A.M. If the mill agents close the mill, say from 9 to 9-30 A. M. and again at midday, or some time during the afternoon for half an hour, better results would be obtained as regards quality, waste and production. The life of a mill hand in India is not to be compared with the life of an English mill workman; the conditions under which they live for so different. If schools were introduced for the young boys and girls in order to teach them cleanliness and common sense, and to tell the *truth*, it might assist them as they grow older. I am not prepared to say that these schools would be a success. Regarding certificates for children, I do not think a better system can be brought forward than the one already existing in Ahmedabad. A boy should be allowed to work from two to three weeks without a certificate; if he is not physically fit, it would be seen by the certifying surgeon by that time. I do not see any necessity for creating a special class of intermediate workers, as too many classes of workers would be confusing. It is better to raise the age standard from 9 to 10 years as we find that in some cases children at 9 are not strong. The young boys and girls have no hard work to do; and in many mills they spend fully half or more than half the time in playing about the compound. Women are chiefly employed in the reeling department, and are on piece work. I do not see why they should not work as they do in England (*i. e.*, the same hours

Mr. Knowles.

as men) as their life at the mill is the same as that of the men—a very independent one. They work only when they choose to do so. I think the hours of working of mills should be fixed, otherwise the laxity may be abused as it would be in any country. I would also suggest that instead of trying cases of infringement of the Factory Act by an ordinary magistrate, the object of the law would be better served if a special magistrate selected from among the mill agents and mill managers were made to sit jointly with the magistrate. I do not see any necessity for bringing out inspectors from England. I think only those should be factory inspectors who understand the law, and have spent some years in Indian factories and thus understand the difficulties the mill managers have to contend with in India. The ventilation and sanitation in factories I have seen during my ten years in India have been all that could be desired. The surroundings of mills and the mills are much better than the habitations of the labourers.

Oral evidence.

Witness stated that his Indian experience extended over 10½ years. He had been seven years in Ahmedabad, and formerly worked in Bangalore, Calcutta and Madras. He thought 12 to 12½ hours sufficient for the engine to run. If definite hours were fixed, applicable all the year round, it would mean that in the shorter days they would be unable to complete the day's work without artificial light. He thought the Ahmedabad system a good one, whereby they worked certain hours according to the time of year and only during the day—the sunrise to sunset system. In Calcutta they tried a system of shifts in a mill in which the witness had been employed, but it was abused and the system was a failure. Some men often worked much in excess of their proper shifts. The work done by aid of the artificial light was superior to that turned out by day light; he attributed this to the effect of the electricity on the cotton spun. It was easier to spin. Witness could not answer the question whether managers could be stricter than at present without driving away the men. This depended upon unity among the mill-owners. The time wasted now might run a little beyond 10 *per cent.*, but not much. During the last six months he had found no shortage of hands. He did not think that mill operatives liked electric light. It was those mills that worked long hours by the aid of electric light that had most trouble with their hands. Long hours meant more pay, but he did not consider that that acted as a great inducement to the men. Under the sunrise to sunset system the hardest work came in the hottest part of the year, and this could hardly be helped. He liked the Ahmedabad system. If there were two stoppages in the day with a view to keeping the men more inside the mill, except at the regular intervals, such a system might be successful. At present the operatives had a lot of latitude, but if all the mill-owners were of one mind, they could effect considerable improvement in this respect. The masters must be prepared to enforce stricter discipline. If a 12 hours' day were decided upon, he would place the extra possible daylight working hours in the midday interval. The men would not, however, make this their meal time. In his opinion the introduction of electric light led to evasions of the Act. In Ahmedabad he had tried electricity for one week only. It was not successful; the hands did not like it, and it did not work well. Some of the children were very small, and did not look like 9 years of age. At 14 they were capable of doing a full day's work. All children were certified by the doctor and carried a pass. The pass-out system did not apply to children and females. The child only worked 50 *per cent* of his time, and was employed in doffing. He allowed 10 *per cent.* passes for adult males. Witness had no connection with the commercial side of the work of the mill. His duties were mechanical and technical. In January the working day was 11 hours and in June 13½ hours. He had never tested whether the output *per* hour *per* spindle was higher in January than in June. In his opinion the output *per* day would average the same, whatever the hours. It would not be less for longer hours, over the whole day, on account of the men becoming exhausted. In the long day they had a larger total production than in the short day. His experience in Calcutta was that the production by electric light, working long hours, was larger *per* hour than in the daylight hours. He had already given the reason for this. The men, working with electric light, looked very tired in the evening, but all the same the work done was better.

Witness No. 14.

Mr. Vaikunthrai Ambalal Desai, B. A., Secretary, Treasurer and Agent of the Ahmedabad Merchants' Spinning Mills Company, Limited.

Mr. Vaikunthrai Ambalal Desai. Written evidence.

I am secretary, treasurer and agent of the Ahmedabad Merchants' Spinning Mills Company, Limited. The number of hands employed in the above mills is as follows:—

420 males.	127 children (male).
86 females.	21 children (female).

The Merchants Mill has been working for nearly six years, and I should think that, on an average, the mill works for more than 12½ hours a day for about 100 days in a year. The average working hours for a year is very nearly 12½ hours a day. I am sorry I have not preserved the statistics I took of the variation in production during the different working hours of the day. I can say from my books that in longer days we get, on an average, an oz. *per* spindle in 20s more production than in shorter days of the year. I may also add that as far as I have observed the best work done in winter is during the first two hours after starting, and the two hours after noon recess. This, however, is not true of the hot season. In the hot season the evening hours and the morning hours are productive of the best results. The Indian labourer is entirely of a different type from the English labourer, as the latter is depicted in books and described by men who come to this country as spinners, carders, weavers and managers. The Indian labourer will take his full hour for washing his face, teeth, etc., one hour for his morning meals, and over an hour for smoking, making that up in three to four instalments. In the longer days, *i. e.*, in the days when the engine is running nearly 14 hours a day, there is not a coolie in the spinning or weaving mill who actually works for more than 11 hours a day. In my humble opinion instead of the present half an hour's recess from 12-30 P.M. to 1 P.M., if the mills were stopped twice, *i. e.*, from 7-30 A.M. to 8 A.M. and 1-30 P.M. to 2 P.M., in hot days and from 8 A.M. to 8-30 A.M. and 12-30 P.M. to 1 P.M. in winter, the results would be at least the same, and perhaps better if a stricter watch is enforced against

people going out immediately after recess. Indians as a nation do not understand the significance of the words duty, system and honour; what the Indian labourer needs is to be trained to a system, and raised up to a sense of honour and duty. If the British Government really wishes to render the poor working classes of India real assistance, the only suggestion, or the only enactment that is essential, is the giving of universal primary education to the labouring class. This could be done by opening schools for all the half-timers in all the mills. A special series depicting the harm done to the body by liquor and the ruin it brings to the family should be got ready, and lessons should also be introduced describing the advantages of thrift. The regular showing of magic lantern plates such as those specially prepared by the local Temperance Association may tend to do material good. The Local Government should be asked to render such schools all sorts of assistance, and the mill agents should be asked to set apart a small sum every year for the distribution of prizes among the labourers. The Indian factory labourer lives a longer and leads a happier life than any other Indian who has to depend on manual labour for his living. He is the best paid coolie, and but for the ruin brought by drinking and reckless expenditure on pay days he would be richer, healthier and happier by far than the middle-class man of India. The Government should be requested to close liquor shops in the vicinity of mills, and in the vicinity of the dwellings of the labouring classes. No shop ought to be allowed to be opened within half a mile of the mill compound. My statement as regards the longevity of factory labourers could be verified by comparing the average life of the factory labourer with the average life of a farmer in a village. It may also be seen without going into statistics that the classes that live on factory labour (*dhers* and *wagris*) are growing from day to day, while the cultivator and the menial house servants are decreasing. There is a greater percentage of birth rate and a lesser percentage of death rate among the *dhers* and *wagris* than among the *kunbis*, *borahs*, *bhats*, etc. There is one more special feature characteristic of the Indian labourer. No labourer in India attends to his work all the days in the month. One has only to look to the muster-roll of any mill to verify the statement. There are from 10 to 15 *per cent.* of the labourers absent on the next day after pay day in every mill. I have more than once offered prizes for regular attendance, but it is impossible to get any one to deserve them. For all the reasons mentioned above the managers of Indian mills have to engage three workmen where there is one in England, and even then the machine that the three work-people mind in India does not produce anything like the same machine in England. A week's time is sufficient for getting the medical certificates of children. There is a possibility of abuse if this be allowed, but this could be checked as well as many other irregularities by compelling factories to keep separate muster-rolls for adults and children of different sets. Though there is no rule enforcing special certificates for half-timers before working as adults when they grow in age, the effect of the present enactment covers the object of such a rule. The present inspectors take pretty good care to see that no half-timer works as an adult. On an average every child generally goes from five to six times to the surgeon before he is passed as a full-timer. The creation of a class of young persons, though it sounds feasible, is likely to be very troublesome to the mill agents. There is every possibility of there being a good deal of confusion, and I for one do not see the utility or the benefit of the proposal. Sunrise to sunset is, I think, the best standard for working factories, excepting the cases of mills which are worked by electric lights and by shifts. I have mentioned above that the labourer does not work all the time he is supposed to be on work. Allowing him greater time of recess till his moral tone has improved, till his wants have increased, till he understands the principles of sanitation, will only be affording him greater opportunities of indulging in luxuries, of running hopelessly into debt, or of ruining himself in other ways. In the interests of the labourer I would on the other hand insist that he should be kept busy, and that even on holidays the employé had better engage him in recreative sports, and in certain amusements which would tend to improve the tone of his mind. I would further like to suggest that instead of trying cases of infringement of the Factory Act by an ordinary magistrate it would be better if all the cases were tried by the ordinary magistrate jointly with an honorary magistrate, specially nominated by Government from among the mill agents. The suggestion that Indian factory inspectors be asked to visit English and continental factories is no doubt happy, and is likely to be conducive to very beneficial results. It should be distinctly understood that the inspector should be sent to receive an English polish after serving in India for at least three years. He must be fully aware of the habits and ways, as well as the special circumstances of this country, before he goes to England. The idea of lodging all labourers in special *chawls* built on the latest sanitary principle may tend to be advantageous both to the employers and the employed. The suggestion of enforcing separate arrangements for urinals will be welcomed by all. As regards the sanitation of factories, I think that most, perhaps all, the Ahmedabad mills are well ventilated. The only harm that is likely to be done to the labourers' health is by his suddenly going out from a humidified chamber to open sunshine. The Indian labourer goes out so often that the change is too sudden, and in certain cases injurious to his health.

Mr. Vaikunthrai Ambalal Desai.

Witness objected to the proposed 12½ hours' day all the year round. With such a day the men would only actually work about 10 hours, and considering the way in which they did work they could keep at it much longer than that. He was against restricting the hours of adult labour. The death-rate amongst mill-hands was very low compared with that of the cultivators outside. In his village they could not find a man of 60, while in the mills they found men of 65 and 70 years of age. The seasons failed, and villagers did not get sufficient to eat. He had no data to support his view of the relative death-rate. Mill-hands did not get the chance of drinking more than once a week, while menials such as *dhobis* drank every day. Mill-hands did not drink because they did not get time to drink, and from this point of view long hours were an advantage. Witness considered the present ages for chilren suitable. He saw no objection to the physical fitness certificate for children, but did not consider it necessary to have another before employment as a full-timer. He approved of giving the children education and of having schools in the compound, and thought that some inducement should be offered to the children to make them attend. Owing to the idling habits of the adults, he was obliged to employ 50 *per cent.* more hands insome departments, and 30 *per cent.* more in others. Witness approved of special intervals—one in the morning and one in the afternoon. There was sufficient dining accommodation for all castes in the mill compound.

Oral evidence.

WITNESS No. 15.

Mr. Maganlal Jaichand, Ahmedabad.

Mr. Maganlal Jeychand. *Written evidence.*

I represent the Ahmedabad Swadeshi Spinning and Manufacturing Company, Limited, Ahmedabad. We employ—

Men	282
Women	65
Children	85
Total	382

The mill only started working in August last. I am opposed to any limitation of the hours of adult labour, because in short days if the working hours be fixed from sunrise to sunset it comes to only 11 hours, and in long days of summer to about 13 hours. Besides, the workmen do not actually work during all the working hours. One man in eight is away from his work with a pass at times in *bidikhana* or drinking water. I do not think their physique has been specially affected by long hours. If any time is to be fixed it should be from sunrise to sunset. I have considered all the other suggestions made in the questions, and do not agree with any of them, except that—

(*a*) special urinal accommodation should be provided;
(*b*) all factory doors should be made so as to open readily outwards;
(*c*) the administration of the Act should be made uniform throughout India;
(*d*) children should be allowed to work in a factory for three weeks prior to medical examination.

Oral evidence.

The mill was started in August last. Witness had been in the trade for 25 years, but this was his first experience of actual management. Witness was of opinion that operatives did not like night work, even on increased pay. Mill-hands were not reduced in health by their work, and the children were also perfectly healthy and not over-worked, because at their option they could go out to the mill compound whenever they liked. There was a considerable scarcity of labour. He did not agree that a certificate of physical fitness was a necessity either for children or adults. The working hours should be from sunrise to sunset.

WITNESS No. 16.

Mr. Chimanlal Nagindas, Ahmedabad.

Mr. Chimanlal Nagindas. *Written evidence.*

I represent the Ahmedabad Manufacturing and Calico Printing Company, Limited, and the Ahmedabad Jubilee Spinning and Manufacturing Company, Limited. The following is the number of workers in each mill:—

The Ahmedabad Manufacturing and Calico Printing Company, Limited.		The Ahmedabad Jubilee Spinning and Manufacturing Company, Limited.	
Males	1,260	Males	347
Females	234	Females	106
Boys	182	Boys	88
Girls	55	Girls	44
	1,731		585

The Ahmedabad Manufacturing and Calico Printing Company, Limited, has worked from sunrise to sunset, and so in each of the last ten years it has worked more than 12½ hours only during the months of May, June and July, and the average number of working hours is about 12. The working of the Ahmedabad Jubilee Mill up to the year 1904 is the same, *viz.*, an average of 12 hours, and the mill worked more than 12½ hours only during May, June and July. In 1905, when they worked with electric light, the figures were:—

Number of days.	Number of hours.
27	13
28	14
6	15
(With double shifts.)	
5	16
13	17
4	18
10	19
21	20
8	21
93	22
75	23
290	The remaining days were of less than 12½ hours.

In 1906—

130	13	
79	14	
209	Ditto	Ditto.

In 1907—

162	12	
98	13	
260	The remaining days were of less than 12½ hours.	Mr. Chimanlal Nagindas.

Average working hours a day :—

1905	19·8	on account of night work.
1906	13·1	
1907	12·1	

Children should be allowed to work from one to two weeks pending examination for an age certificate. Certificate of physical fitness is not necessary. The present arrangement of certifying by the civil surgeon is good enough. The principle of requiring a certificate of physical fitness cannot be applied in practice without much inconvenience. It is impracticable to enforce the suggestion that half-timers should not be allowed to work as adults unless certified physically fit. If the certifying officer puts in the age in the certificate of each half-timer, then as long as he does not complete fourteen he will not be kept as a full-timer by any mill. I am not in favour of the creation of a class of young persons. The effect of creating such a class of young persons would be scarcity of hands and higher wages. Further, the effect on the economical working of the mill will be very great as will be seen from the following figures. Out of 1,731 total workers, there are—

205 women.
84 young persons (between the ages of 14 and 16)
237 half-timers.

No definite limitation by law of the hours of working to any particular hours is desirable. I would be in favour of fixing a maximum number of hours, leaving it to the employer to fix the actual timings, but in the case of factories working by double shifts no limit of hours is necessary. The conditions of dyeing, bleaching and ginning factories require exceptional treatment In the case of dyeing and bleaching works there are some processes which require continuous working for more than 12½ hours; in such cases the time limit should not be enforced. In the case of ginning factories, during the cotton season it is necessary to work the gins night and day; they should be accorded exceptional treatment for night working, in no case the workmen working more than 12½ hours continuously. Males and females should work the same number of hours. Inspectors from the United Kingdom are quite unnecessary. Even as it is, more elasticity is desirable in the law, especially in the case of prosecutions. Special attention should be paid by the prosecuting officer to the question whether the default or delay on the part of the factory is due to defiance of the law or to the practical difficulties in carrying out the inspector's suggestion. At any rate no prosecution should be undertaken before two or three warnings have been previously given. In the certificates of age that are at present given by the civil surgeon, it is, by some officers, only stated that the child is above nine years and below fourteen. I think that the exact age should be put in the certificate, so that for examination to work as a full-timer the child may not have to appear again and again. If the working hours are reduced to 12½, females should be allowed to work the same hours as adult males. They do not work full hours at a stretch and continuously, and so there is no danger of deterioration of health, and the proposal would facilitate the adoption of a 12½ hours day, as females can be easily obtained. Inspectors of factories should have previous experience of practical work in a factory, so that they may adequately realise the difficulties of actual working while enforcing the law, and thus save good deal of inconvenience to the factories. The working hours of adult males may be limited to 12½ working hours. All adults—males and females—should be allowed to work for 12½ hours. There should be 12½ hours' working between 5-30 A.M. to 8 P.M., as convenient to each mill. If the factory stops once during the day, it should be between noon and 2 P.M., but if the owner wishes, for the convenience of the factory and the workmen, to stop more than once, he should be allowed to do so, the aggregate limit of such stoppages being not less than ½ hour and the interval not greater than 6 hours. I think there should be no restriction with shifts, but the factory may work as many hours as it likes, no shift working for more than 12½ hours, and no females working between 8 P. M. and 5-30 A. M. A special class of young persons is not necessary here, nor is there any need for a register of all workers under sixteen. The employment of women at night should not be prohibited generally, but for cotton mills they should not be employed after 8 P. M., and if the working hours are restricted to 12½ they should be allowed to work the same hours as male adults. The minimum age for children should not be raised, nor should certificates of physical fitness be required. The present arrangement is quite enough. Certificates of age and fitness prior to full-time employment are not necessary. The age should be entered in the register when the child goes up first for examination, and after he has finished the remaining number of years to make up fourteen he should be allowed to work as an adult. Regular sets, prescribed by law, are not necessary. They should be arranged as convenient to each mill. Factory owners should not be required to provide elementary education for half-timers at their own expense. In factories no unhealthy parts exist, and so no prohibition against the introduction of non-working children should be prescribed, as it would seriously inconvenience the female workers by separating them from their children. An attempt should be made to fix a standard of purity for the air in mills, but not for moisture. The latter is not necessary in India. A standard for water is not necessary, as generally pure water used for drinking purposes is used for humidifying. Fifty latrine seats is quite enough; there is no inconvenience to workmen. Separate urinals are not required. For septic tank privies the number should be raised from 50 to 70 or 75 for each seat. It is usually acknowledged by sanitary engineers where they have septic tank privies that no separate urinals are necessary. All factory doors should open outwards. The present precautions for fencing machinery seem quite satisfactory. Uniformity in the administration of the Act is necessary. Full-time medical inspectors are not required.

Mr. Chimanlal Nagindas.

The Ahmedabad Manufacturing and Calico Mill.

Working day of	Production of reeling yarn *per* spindle *per* hour of 20s.	Percentage of waste.	Period covered by these statistics.
	1903.		
11 hours	·51 ounces.	3·5	One year.
12 „	·48 „	3·5	
13 „	·50 „	3·6	
	1904.		
11 hours	·54 ounces.	4·2	One year.
12 „	·53 „	4 6	
13 „	·48 „	4·5	
	1905.		
11 hours	·55 ounces.	5 1	One year.
12 „	·49 „	5·5	
13 „	·54 „	4·5	
	1906.		
11 hours	·51 ounces.	4 2	Oneyear.
12 „	·44 „	5·1	
13 „	·48 „	4 7	
	1907.		
11 hours	·50 ounces.	5·2	Eight months.
12 „	·44 „	5 3	
13 „	·53 „	5 0	

The Jubilee Mill.

Working day of	Production of reeling yarn *per* spindle per hour of 20s.	Percentage of waste.	Period covered by these statistics.
	1904.		
	Ring Spindles.		
12 hours	·61	...	One year.
13 „	·59		
	1905.		
12 hours	·54 day.	4½	One year.
11 „	·48 night.	6	
10 „	·55 night.		
	1906.		
12 hours	·57		One year.
13 „	·54	4	
14 „	·53		
	1907.		
12 hours	·57	...	Eight months.
13 „	·56		

The witness considered that the working day should be fixed at twelve and a half hours, the half-hour interval to be extra. He had worked his men in shifts after fifteen hours, and never saw any signs of exhaustion. That was to say, there were no signs of exhaustion up to fifteen hours. They were paid at the same daily rate for extra time after sunset, and they preferred to work on and earn the extra pay. It was only those men who came from a long distance who objected to long hours. Latterly, some new mills had opened, and he could not get sufficient labour. Consequently he had to stop night work. Concerning the drop shown in the statements appended to his written evidence in the hourly output as the hours of work increased, witness said that the production *per* hour was smaller, but it was not so *per* day. Neither was it more economical for the owner to work shorter hours, as in the course of the day there was not much perceptible difference in the amount of waste comparing short and long days, while the general charges for interest, management and so on were spread over a larger production in the latter case. Theoretically, there was an increase of waste as the hours increased; this seemed so *per* hour, but was not so on the whole, and it would not be economical to work shorter hours. Contrasting the work of the thirteenth and fourteenth hours with that of the first and second he considered that, while they might not get such full value for the money paid in wages, they had to remember that capital had been spent in running the mill for several hours, and the result was the same. Witness would employ adult labour entirely during the hours proposed by him, females as well as males. Females used to work such hours before the present Act was passed, and now they spent their interval in the mill compound. They did not go away. The male adult interval was half an hour, and the male adult had to work for the other hour, when the women were absent, without assistance. Witness would not approve of women being employed in cotton factories beyond 8 o'clock at night, but for ginning factories female labour was necessary after that hour. Witness could not account for the higher rate of output *per* hour shown in the statement in some cases for a 13 hours' day as contrasted with a day of 12 hours. In preparing the statement he had taken an average of the whole period for a certain number of days, and it was possible that on some days there had been stoppages, or that the various departments of the mill were not working smoothly. The statement had been prepared from the production books. Witness did not think that the weighers kept anything in hand in order to equalise production. They might for a day, but not for a month. He could not say offhand why it was that in the 13 hours he got less production in some cases than in 12 hours. Witness believed that it would not be economical to work the mill for longer hours than these which might be fixed by law for young persons. Personally he would have to dismiss those workers, as the "young persons" would not consent to work half-time, and they would not be allowed to work full adult hours. They would disorganise the work of the mill. He considered nine a proper minimum age for children. He had no objection to the age certificate, but saw a good deal of difficulty as regards the physical fitness certificate. Medical officers held varying opinions as to the fitness of any particular child. From the sanitary point of view septic tank seats for latrines were much better than the ordinary seats, and fewer seats were required, as no time was lost in having seats cleaned for use. Witness had no special objection to children being employed in regular sets, but should there be a school, then the double shift was necessary. He had tried compulsory education, but found that the children left to work in other mills. When the attendance was made optional, they did not come at all. He liked the principle of compulsory education, but would not like to see it made compulsory by law. Concerning purification of the air, he had got fans, and he would like to see a standard of ventilation arrived at by a series of experiments. Witness would not object to that being made compulsory, but he would to a standard of humidity which depended so much upon the circumstances of each mill, the cotton worked, and so on. Some women who were mothers brought their children to the mills, but they were not allowed to take them to all parts of the factory. He had a doctor and dispensary. Witness considered that more than three hours were wasted by the operatives in idling outside the mill. The pass system was not strictly enforced. Personally he was in favour of two stoppages in the course of the twelve and a half hours' day—one about 10-30 A.M. and one at 3-30 P.M.—of half an hour each. Owners would have to be a little stricter as regards idling. The first stoppage would do for breakfast, and there should be sufficient accommodation for all the men at a time in the compound. There should also be accommodation for the different castes. If the 12½ hours' day were legalised, the difficulty would lie in being stricter with the men so as to minimise idling. There was considerable scarcity of labour through new mills being built. Mills which had accommodation would not object to the two half-hour stoppages, but the mills which would have to provide additional accommodation would object. If the hours of labour were restricted to twelve, or twelve and a half, then females should be allowed to work the same time as males. This was most important. Witness did not object in principle to legislation restricting the hours of male labour.

Mr. Chimanlal Nagindas. *Oral evidence.*

Witness No. 17.

Mr. Chinubhai Madhulal, Ahmedabad.

Mr. Chinubhai Madhulal. *Written evidence.*

I represent—

	Males.	Women.	Boys.	Girls.	Total.
The Ahmedabad Ginning and Manufacturing Company, Limited employing	2,027	170	104	4	2,305
The Ahmedabad Spinning and Weaving Company, Limited, employing	1,372	254	111	18	1,755

I append a statement showing the average working hours for each month for one year. During the past 10 years, and during the years beyond this period, the time of working has uniformly been the same, *viz.*, daylight hours, and consequently the figures given for one year can safely be taken as correct for the whole of this time. If the existing practice of working mills during daylight be maintained, I do not see any necessity for limiting the working hours of adult males, whose physique does not suffer during these hours, because they have unrestrained facilities

r. Chinubhai adhulal.

to go away from their work and loiter about for a considerable time on every imaginable excuse. If hours are to be limited the best arrangement in my opinion would be their limitation to daylight hours, which virtually come to an average of about 12 hours a day during the whole year. It would be preferable to fix a maximum number of hours, leaving it to each employer to settle for himself when work began and ended. During the months commencing from November and ending with February, the working hours come to about 11 hours a day, while during the summer months, from 15th of April to the 15th of July, the average is slightly over 13 hours a day. The remaining months are equinoctial months, which average about 12 hours. Thus for the whole year the total average is about 10 minutes over 12 hours, for a working day, excluding the midday stoppage. Ahmedabad being about 300 miles north of Bombay, the variation between winter and summer months here is more marked than at Bombay. The engine should be stopped for half an hour between noon and 2 P M. daily. In mills working exclusively with adult male labour, and resorting to the shift system, if the hours of adult males be fixed at 12 actual working hours, the restriction of the working time from 5 A.M. to 8 P.M. is uncalled for. Such mills ought to be allowed to work up to any time, provided that they do not overstep the fixed limit of 12 hours for each shift. So far children between the ages of 12 and 14 have not been illegally employed as adults, and in the absence of such a contingency there is no necessity to create a new class of "young persons." The greater the number of classes the more complicated and cumbrous becomes the operation of the law. The creation of a class of young persons would naturally go to determine the working hours of a mill, as such operatives would be scattered among all the departments. To reduce the working hours of this class would disorganise the whole mill. I cannot say how many such persons we employ. In cotton mills the employment of women beyond daylight hours may be prohibited; but at the same time if the working hours of male adult labour be fixed at 12 hours a day, the employment of adult female labour should not be restricted to 11 hours a day as at present, but it should be extended to 12 hours In ginning and cotton press factories, where work must be completed within their season time, the restriction of the employment of female labour should not be made applicable, but the existing practice of allowing women to work there at night should be allowed to continue. In this class of work, the nature of their work is quite different from what they have in cotton spinning and weaving mills. Here they come and go whenever they like, putting any of their family members as their substitute. The minimum age for children should not be raised; the present age is high enough. The existing system of requiring certificates of age for children is sufficient. I would suggest that in age certificates the age of the child should be clearly specified instead of mentioning "over nine and under fourteen years" as is done at present. A child should be allowed to work for not less than a week, and not more than a fortnight, prior to examination for a certificate. More certifying agencies should be provided. If the suggestion made above be adopted, there should be no necessity for demanding a fresh age certificate on the completion of fourteen years by the child. In my opinion the fewer the necessities for the operative to procure certificates, the lighter becomes his hardships and difficulties. Here also there is no necessity for physical fitness certificates. The present system of employing children should be continued, as it is not found to be unsatisfactory in working. There is no need to prescribe regular sets. Owners should not be forced to provide education. This should be left to the option of both the employers and the employés. Non-working young children should not be prohibited from entering factories. These are generally young children who accompany their mothers and guardians, and if they are prevented from accompanying their mothers and guardians the latter will be thrown out of employment, and this will entail grave trouble and hardship to both. It will be very difficult to lay down a hard and fast rule whereby ventilation ought to be regulated. Conditions differ and vary materially in different places on account of natural situation and the nature of the work that a mill has to do. At certain temperatures moisture becomes absolutely necessary for carrying on the various processes according to the cottons that are handled, and the counts to be spun. This should therefore be left to the discretion of the managers of mills, who even now and will hereafter pay their best attention to these points, because they too have to work with the operatives in the same place, and they will naturally not do anything nor allow any state of things to go on that is likely to be detrimental to their own health. What is right for the health of the managers will be right for the health of the operatives. The present standard of latrine accommodation is quite sufficient, especially if separate urinals are made imperative. All factory doors should readily open outwards. No further precautions for fencing machinery are required. The administration of the Act should be made uniform throughout India. Full-time medical inspectors are not required at present. Inspectors having experience of the working in mills *in India* rather than in England will be found to give more satisfactory results. The conditions and mode of work in Indian mills differ so widely and markedly from those in English mills that inspectors that have exclusive experience of the working of English mills will not be found to adapt themselves to the surroundings of Indian mills, and are therefore likely to prove failures. There is absolutely no necessity for making the law more stringent, but in case any change be introduced, an interval of at least six months should be given to the mills to prepare themselves to conform to such a change, and after the expiration of this term at least three warnings should be given to mills for any infringement that may be detected before taking more drastic steps. Any attempt to make the law more stringent would mean greater hardships and distress to workmen whose conditions, physical, mental and pecuniary, if compared with coolies and labourers not going to mills, will be found to be infinitely superior and satisfactory. Government, therefore, should leave mill operatives undisturbed in their present conditions if they want to do them real and signal service.

In the following cases the necessary number of workmen ought to be permitted—whatever the provisions of the law may be—to work at the discretion of the employer, over and above the prescribed hours, on payment of overtime:—

(*a*) all mill accidents, including accidents by fire, water, etc;
(*b*) for repairs and alteration work in engines, boilers, gearing and machinery, etc.;
(*c*) boiler firemen, engine drivers, pump workers, and mechanics who ought to be at their duties a considerable time before the commencement of actual working hours, to get up steam, and prepare the engines to start;

(*d*) in the process of bleaching and dyeing, where it is essential to complete the process, once begun, during working hours. Mr. Chinubhai Madhulal.

I append a statement showing the production for days of varying length of yarn and waste.

Working hours in twelve months.

	Hours.	Minutes.
January	11	1
February	11	7
March	11	58
April	12	19
May	13	14
June	13	24
July	13	12
August	12	51
September	12	40
October	11	46
November	11	14
December	10	49
Total	145	38
Average	12	8 *per* month.

Number of days over 12½ hours work—125 days.

Statement showing the effect of working days of varying lengths.

Working day of	Production *per* spindle *per* hour of ten's. Mule.	Production of reelings *per* spindle, *per* hour of 20's. Ring.	Percentage of waste.	Period covered by these statistics. year.
11 hours.	·34	·445.	1 18	1906
12-38 hours.	·28	·407	1·30	1906
13-40 hours.	·26	·408	1·21	1906

Witness stated that since 1886 he had taken a personal part in mill management, and he had now two mills in Ahmedabad. In his opinion there ought to be an absolute maximum of 14 hours' work, even with electric light. The operatives would not come to work beyond a certain number of hours, and the surroundings of their dwellings, where they would spend 10 hours, according to his figure, were no better than the surroundings of the mills. They could work 14 hours without injury to health, but whether they would be able to apply themselves steadily all the time was another matter. If they had a half-hour interval about 9 o'clock in the morning, he did not think they would use it for the purpose of eating their morning meal. Thirteen hours and 24 minutes was the longest time worked in his mill, excluding the interval; he did not think that operatives could keep those hours up all the year round. He believed in working throughout the daylight hours; he had not tried electric light. A few mills in Ahmedabad had introduced electric light. These mills commenced work at 5 in the morning, and the operatives refused to go on after 8 at night. His tabular statement giving the rate of production of 10's *per* spindle *per* hour showed that the gross output of the shorter days was greater than the gross output of the longer days in some cases. He could not say for certain that this actually was so, because the machinery might have been spinning different classes of cotton at the times which the statistics covered. There might also have been better mixing. His quality of 10's was poor. He only used 12 *per cent.* of good cotton, and the rest was waste. He would not say that it was more profitable when producing 10's to keep the engine running shorter hours. He himself would not draw any definite conclusions from the tabular statement. He admitted that, according to his statement, as the hours of labour increased, the output *per* hour decreased in some cases more than proportionately. They did not, however, expect a proportionate increase during the longer working days. In drawing up the statement he had no data to show what kind of cotton was spun. The exhaustion of the workers was probably the main factor in the diminishing output for the longer hours. In his opinion electric light was responsible for greater waste; it wore out the machinery and prevented proper supervision, while he did not think that the extra production would make up for these defects. If they had a 12-hour day, all mills would have to put in electric light, and he would prefer to work by daylight. The installation of electricity was a constant temptation to work longer hours. He would prefer to have no restrictions on adult labour, and did not like an indirect restriction by imposing a limit on the working hours of young persons, which would in fact determine the working hours of the mill. If there had to be a limitation, he advocated sunrise to sunset; it would be immaterial what the length of the midday interval was if a 12-hour day were fixed. At present the men were the masters. They were quite independent owing to the demand for labour being greater than the supply. They had no regular organisation, but then the masters themselves did not combine to withstand the demands of the men. There was no marked preference one way or the other as regards electric light mills and mills where only daylight hours were worked. He disapproved of women working late in cotton factories, because the labour required *Oral evidence.*

Chinubhai Ihulal.

steady application, and it was necessary for women to go to their homes towards evening. In ginning factories it was different. The season only lasted a few months, and if long hours were prohibited, the gins would not be able to gin the crop within the limited time available. Cultivators from the fields came to work in the gins, and if the season were extended, they would be unable to return to their fields previous to the burst of the monsoon. Women should be allowed to work more than 11 hours in ginning factories, but if such factories were brought under the Act, it should only be in regard to the fencing of machinery. He objected to the application of the Act to ginning factories in regard to length of hours and stoppages. Witness mentioned that on a certain fixed date, namely, the second day of the dark half of the month of Jeth, work had to be stopped in all gins controlled by Jains, and in all gins owned by others, even Europeans, where the Jains had a paramount position. Under the Act he considered it compulsory to obtain a certificate before employing a child, and he had no objection to this, but he thought they might give the power of certifying, not only to the civil surgeon, but also to other Government medical practitioners, the assistant surgeons, for instance. He employed children in regular sets, and had not come across a single instance where a child had been employed in two different mills in the course of one day. He thought the age of the child should be definitely stated on the certificate, in which case they would be able to employ him after 14 years of age without a second certificate. At present they had to obtain a certificate that the child was over fourteen. The hands themselves paid the four-anna fee. Half-timers only worked between two and three hours, actual work, at doffing each day. He employed shifts of ten boys to ten machines, and when the machines were at work, then the boys were free to do as they pleased. If boys were rejected from the mills on account of physical unfitness, it was his opinion that they would take to begging and thieving. Boys were sometimes employed for a week or a fortnight before being certified by a civil surgeon. The fixing of a $12\frac{1}{2}$ hours' day all the year round would be injurious, in that the hands on piece-work would demand higher wages, as their working time would be curtailed. Workmen on day wages would also be dissatisfied, because the piece-work rate would have to be raised, while they would get no higher daily wages. He had a sliding scale for piece-workers based on the number of hours worked at different times of the year, but the daily wage was the same all the year round. He had tried holding a school in his compound, and although inducements were offered, yet the children stopped away and the experiment was unsuccessful. Parents would not compel their children to attend school because they themselves were ignorant of the value of education.

Witness No. 18.

Mr. Kalidas Umabhai, of the Hathising Manufacturing Company, Limited, Ahmedabad.

Kalidas Umabhai, *on evidence.*

We employ 316 men, 38 women and 44 children. The physique of labourers, though they apparently seem to work for long hours, is not in the least affected, as the system of working in India is such that they go out for a temporary rest now and then. Though they are said to work for long hours, practically none of the labourers work full time while the factory is at work. If hours are to be limited at all, they should be fixed at 12 a day, leaving the employer to settle the actual timings. The best method of enforcing this restriction would be to fix the legal working hours from 7 A.M. to 7-30 P.M., except when the factory works by shifts, the engine being stopped for half an hour between noon and 2 P.M. When a factory is working by the shift system, the only restriction which ought to be imposed is that no adult should be made to work for more than 12 hours out of the 24 hours. If the time fixed for work is limited to 12 hours only, there remains no necessity to make any change in the period fixed for the working of persons between the ages of twelve and fourteen, as the system of working in India is as described above. No special register for workers under 16 is required. It is not necessary to prohibit women from working at night, if the night hours form a part of the prescribed working hours of a factory. The minimum age for children should not be raised beyond nine years, because the half-timers practically never work for the full prescribed period of seven hours, as generally these boys, whose duty it is to doff the machines, get intervals after one doffing is over, and they are then allowed to go out of the factory, so they practically do not work for so many hours as they are said to work. The certificate of age for children appears necessary and should be enforced, one week's time being allowed during which the child may work before obtaining a certificate. But the enforcement of the certificate of physical fitness will do more harm than good, because in case of their proving physically unfit for working in the factory it is hardly possible in India for them to get any lighter work so as to enable them to earn an equal amount of wages; and consequently they will be indirectly compelled to work harder. A second examination for half-timers before working as adults will not be required if the certificate issued after the first examination shows the correct age of the boy passed, as was done before by the civil surgeon. It should not be prescribed by law that children shall not be employed except in regular sets, because by the adoption of this course a child who fails to attend either in the morning or evening according to his regular set would lose his wages for the day, and his maintenance would suffer, whereas under the present practice a child who unfortunately fails to attend in the morning may be employed in the evening and thus could earn his wages for the day. The provision of elementary education for children would throw an unnecessary additional burden upon their brains, and would devour their dearly earned time for recreation without any purpose. It is quite impossible to separate young babies from their parents, even temporarily, there being no arrangements for the young babies to stay under somebody's care. Attempts should be made to test the air, and possible systems for improving ventilation may be shown to mill-owners, but there should be nothing like a penalty to be attached by law to any omission. There is no objection to fixing a standard of moisture, if it is fixed in perfect accordance with the Indian climate, and if we are allowed enough to work properly. The present standard of latrine accommodation is never found defective and urinals are generally separately provided for in factories. I agree that all doors should open outwards. No further precautions for fencing machinery are required. The administration of the Act should be made uniform throughout India. Full-time medical inspectors are not necessary

Assuming that the principle that half-timers must be certified as regards age and fitness before employment as adults is accepted, it could not be applied in practice, as there would be a great want of men. There can hardly be any safeguard which will prevent such persons from getting employment in other factories. It is not necessary that a class of young persons should be created. If such a class is created the effect on the factories will be bad. The number of working women, half-timers and young persons will be great, and as they work with adults the working of factories would be greatly hampered. Ginning factories should be exempt from the Act and rules, as they can be worked only 3 or 4 months in a year. If they are not allowed to work as they are now, the farmers would suffer greatly, their cotton being unginned before the monsoon. The law should be made more elastic. It may be added that in case of finding anything against rules once or twice, the owners of factories should be warned before any steps against them are taken, and if any steps are to be taken, then before doing it a written explanation should be obtained by the officer; this process would avoid much misunderstanding and facilitate work.

Mr. Kalidas Umabhai.

NOTE.—The witness did not attend for oral examination.

WITNESS No. 19.

Mr. Purshotambhai M. Hathisingh, Ahmedabad.

The present system of working is, as far as I know, not detrimental to the physique of the workers, because I have seen several times workmen in large numbers outside the mill for smoking, etc. I find that most of the mills work from twilight to twilight, and the average working hours of such mills are a little over 12 hours. I think the maximum legal working hours may be fixed, but not the actual timing, as it will be more convenient to leave this in the hands of employers. If the time for working be fixed at 12 hours, no restriction should be placed on workers between the ages of 12 and 14, as the age certificate of such workers is enough guide for the employers. No extra register is necessary for young persons, as the age of the youngest adult entitled to work full-time is fixed. In some processes the employment of women at night is quite necessary, and therefore no prohibition should be made. There is no necessity to raise the age of half-timers over nine, as such boys only work at the time of changing doff. Certificates of age are necessary, but as for physical fitness it is not necessary to compel a boy to obtain one as no employer would like to have useless, weak and incapable workers. It is quite enough for children to obtain a specific age certificate, which will justify him to work for full-time at the age fixed for adults, as an employer will not engage a half-timer to work full-time and take the risk of prosecution. As for physical fitness in this case my answer is just the same as in the case of children. I can say nothing definite regarding the proposal to make owners provide elementary education, but I can say this much that this sort of occupation will take away the play-time of the boys and thereby it will be adding work on them. By prohibiting mothers or guardians taking their young ones into the mills we shall be putting a sort of restriction upon their income. Attempts may be made to fix standards for ventilation, humidity and purity of water, but no legal punishment should be assigned as different places have different atmospheres on account of their natural situation, and also on account of the nature of the work that is done. The question of moisture depends upon the class of cotton and count to be spun. I have seen the process used in many mills where the jobbers and the superior officers have to work along with the workers, and I have not come across any complaint made by any of them. Separate urinals should be provided, and all doors of factories should be made to open readily outwards. No further precautions for fencing machinery are wanted. Uniformity of administration of the Factory Act throughout India is possible as far as one class of industry is concerned. Full-time medical inspectors are not required; the present system is quite enough.

Mr. Purshotambhai M. Hathisingh. *Written evidence.*

NOTE—The witness did not attend for oral examination.

WITNESS No. 20.

Mr. Sorabji D. Karaka. The Ahmedabad Fine Spinning and Weaving Company, Limited, and the Hitwadhak Mill.

There is no necessity at all for limiting the working hours of male adults. The mills work over 12½ hours a day for about 4¼ months each year. The hands are in the habit of going out for 10 or 15 minutes every hour, so that we have to employ 3 men on a machine where one female tenter is considered quite ample in England. For example, on a frame we employ two men, one for the back and one for the front side, and keep a gang of 16 boys and a *mukadam* for doffing the frames; while in a mill in England two frames are minded by a female tenter with one girl to assist—thus there is 1½ tenter for two frames while for two frames we employ six. Owing to this, the hands have ample leisure to play about in the mill compound. If the Commission will pay a surprise visit to any mill and number the hands working inside the mill and playing outside in the compound they will be fully convinced about this. The physique of the work-people is not at all affected by long hours. In Ahmedabad almost all mills work from sunrise to sunset in the months of April, May, June and July when the days are longest, say about 14½ hours and at the same time these months are the hottest months of the year. I have not found any difference in the physique of work-people. I have been connected with the mills since the year 1882, and I have never heard mill work-people complaining of long hours, but I have always experienced they rejoice when the days are longer as they get more in piece-work. Whether the working hours be 10 or 8, still the Ahmedabad work-people are sure to play about for 10 or 15 minutes every hour, and so I see no necessity to fix the hours, but if fixed I would request for 14 hours, as I deduct at least 2½ hours *per* day for playing about, and deducting that the actual working hours will be 11½ hours. If working by shifts 6 A.M. to 6 P.M. will be best; the engine should be stopped between 12 and 2 P.M. for half an hour, but provision should be made that

Mr. Sorabji D. Karaka. *Written evidence.*

Mr. Sorabji D. Karaka.

when an engine is stopped for some repair, etc., after 9 A.M., the half hour recess should be given at that time. If Government resolves to fix the working hours, they should be fixed at fourteen, and two intervals of a quarter of an hour should be given, the first at about 9 A. M. to 9-15 A.M. and the other at about 2 P.M. to 2-15 P.M. This would give a shorter night shift I do not think that a young-person class should be created. I do not think that a register of all operatives under 16 years of age should be maintained. The number of even 14-year adults is not sufficient, and a large number of spindles are stopped. The night employment of women should not be prohibited, because the work-people prefer to work in a group with their family. The age for children should not be raised, nor should certificates of age and physical fitness be required prior to employment. It is seldom that a half-timer works on in the one factory till he is an adult. The employment of children in regular fixed sets should not be prescribed. We generally take a certificate even when a child is found to be a full-timer. Attempts have often been made to give elementary education at the expense of mills, but they have always proved a failure. Though restrictions have been made so as not to allow workers' children to enter the mill, still when they bring food, etc., for their parents they very often do enter. No enforcement by law is necessary. No attempt should be made to fix a standard for air or for moisture. As regards the former, that would cause great misunderstanding; as regards the latter, different seasons and different classes of cotton, and different percentages of size on cloth, require various degrees of moisture. One latrine seat should be provided for every 25 workers, and separate urinals should be provided. Doors of factories should open outwards if that is not likely to lead to thefts. No further precautions for fencing machinery are required. No attempt should be made to secure uniformity in working the Act. It will be all the better to have for different provinces different provisions suitable to the habits and ways of the work-people and the employers. There is no necessity for full-time medical inspectors, as they would be considered an extra police by the public. I agree that inspectors should be trained in the United Kingdom. An inspector who has five or seven years' experience of factories, and of the habits of the people of Ahmedabad and the Bombay Presidency, may be sent to England for training. He should be selected by the higher officials.

NOTE.—The witness did not attend for oral examination.

WITNESS No. 21.

Mr. Himatlal Motilal Hirabhai, Ahmedabad.

Mr. Himatlal Motilal Hirabhai.

Written evidence.

I represent the Ahmedabad Sarangpur Mills Company, Limited. The average number of working hands is 604, of whom 280 are adult males, 80 women and 244 children. The statistics for ten years not being available, my conclusions are based on those for the last two years. These show that in April the mill worked on an average for 12 hours 45 minutes, in May 13 hours 10 minutes, in June 13 hours 30 minutes, and in July 13 hours. The limit of our working time was sunrise to sunset. The average daily number of hours for both the years has been nearly the same, *viz.*, 12 hours 7 minutes. The working hours of adult males should be restricted. As to the question whether the physique of workers has been affected by long hours, it is impossible to give a definite answer. But before arriving at any conclusion in this regard one has to bear in mind the following facts:—The average number of workers in Indian mills is far in excess of that in England. In our mills the average number of workers *per* 1,000 spindles is about 25, while that for an average English mill is said to be about 4 for the same number of spindles. This enables Indian workers to go out for hours, leaving their machines to the care of others. They therefore do not find even the whole day's work very taxing. They are in the habit of leaving the mill building at odd intervals, and loiter about the extensive compound of the mill. It is impossible to check this practice on account of the great scarcity of skilled labour. Again, at any time of the year whenever they think it necessary they may absent themselves and retire to their native villages for rest and change. In fact their average work hardly comes up to the standard prevailing in the United Kingdom, and with sufficient periods of relaxation and rest, which they can obtain at any time, the effect of long hours is greatly minimised. What is wanted is a wholesome check on excessive work in times of prosperity, but the output should in no way be affected in times of increasing competition. The time therefore may be restricted from sunrise to sunset, working by artificial light being altogether prohibited. I therefore propose—

(1) that the legal working hours in all mills should be from 5 A.M. to 8 P.M., working by aid of artificial light being put a stop to altogether. This will practically come to about 11 hours in short days and 13½ hours in long days;

(2) that the engine should be stopped for half an hour between noon and 2 P.M.

It is difficult to say whether there is any physical deterioration consequent upon the employment of children between twelve and fourteen as adults, but this practice may be checked by the measures suggested below. There is no necessity for creating a new class of "young persons" because it will still further complicate matters. There is no necessity for introducing a fresh register of all persons under sixteen. A special register of children is required to be kept in each mill by the present Act. To this register may be added the exact particulars of their age at the time of their medical examination, so that a reference to the old registers will tell us when they complete their fourteen years and may be admitted to work as adults. The employment of women at night should be prohibited. The minimum age for children should not be raised above nine. Age certificates alone should be required as at present, both for half-timers and for half-timers about to work as adults. It is needless to add a test of physical fitness, because it is not to the interest of mill-owners to employ children physically unfit when they have to pay the same wages to all. No regular sets for children should be prescribed by law. They may be allowed to change sets as they find it convenient. If they are not allowed to do so they may perhaps lose the whole day in case they are late by a few minutes. It will not be practical to impose on mill-owners an obligation to provide education. Non-working young children may be prevented from going into those parts of a factory where the

machinery is worked by steam power, or where dust is generated, and this may be enforced by legislation. So far as this town is concerned, most of the mills have their own spacious compounds, and with a sufficient number of ventilators it is not necessary to prescribe an analytical standard of purity for air. It is not only difficult to fix such a standard, but it will even be more difficult to maintain it, if fixed. No standard for moisture or for the purity of water used for humidifying should be fixed. The water used for that purpose in this town at least is pure, being supplied from the Municipal water-works. The present arrangements for latrine accommodation are satisfactory. All factory doors should open readily outwards. So far as cotton spinning machinery is concerned, no additional precautions are necessary for fencing it. The administration of the Act should be made uniform throughout India. Full-time medical inspectors are not required. If the working hours are restricted to 12, as has been proposed, we shall have to work short during four months, as our average working hours for each month given below will show :— Mr Himatlal Motilal Hirabhai

	Hours.	Minutes.		Hours.	Minutes.
January . .	11	12	July . .	13	0
February. .	11	40	August . .	12	10
March . .	12	5	September .	12	0
April . .	12	45	October . .	11	40
May . .	13	10	November .	11	12
June . .	13	30	December .	10	57

In April we will lose 48 minutes, in May 1 hour 10 minutes, in June 1 hour 30 minutes, and in July 1 hour daily on an average. This will come to a total loss of 114½ hours annually, and as a result our production *per* spindle of 33's will be less by 31 ozs. annually. Our working spindles are 24,800, and thus our total output will be affected by 120 bales of 33s count. The average price of one such bale is R230, and the annual loss to which we may be put by restricting the hours of work to 12 will be R27,600. About ten days should be allowed to an employé pending his examination for a medical certificate. Examination once a week for each mill will, in my opinion, answer very well. I have suggested that the exact age of the employé be mentioned in the medical certificate. If this suggestion be adopted there will be no possibility of half-timers working as adults. The only safeguard I can suggest against children of one mill who are rejected as being under-age obtaining employment in another as adults is to keep a complete list of such children with the medical inspector, and refer to it at each inspection. Should any such case be detected, it should be severely dealt with. If a class of "young persons" be created by law with an age-limit of 14—16, and their hours of labour be restricted, it will, in my opinion, practically determine the working time of the mill. As it is, the proportion of the adult males to the rest of the workers is less than 50 *per cent.*, and if a new class of short-timers be added the proportion might diminish down to 30 *per cent.*, and thus it will be economically advantageous to run the mill for the hours during which all the hands can legally work. The probable number of "young persons" may be from 15 to 20 *per cent.* of the present staff. I have suggested that the working time be restricted from 5 A.M. to 8 P.M., with a prohibition on artificial lighting. This will practically restrict the hours of labour from sunrise to sunset. If, however, the Commission is inclined to adopt one of the two forms suggested in question 8 addressed to factory owners, I would prefer the latter one, *viz.*, fixing a maximum number of hours, leaving it to the discretion of each individual to settle the time for the commencement and the termination of the day's work. English factory inspectors are not required, nor is it necessary, that factory inspectors should, in future, receive a considerable portion of their training in England. I do not see any necessity for making the law more stringent. Should it, however, be deemed necessary to make it so, I would like to see it made more elastic. The law as it is sometimes presses heavily upon us. Those within its jurisdiction are all respectable men. Yet such persons are hauled up before a magistrate for a mistake which amounts to a criminal offence according to the Act. When the legal consequences are so very serious, it is necessary that the law should be made as elastic as possible. I would therefore suggest that before launching headlong into a prosecution it should be a legal obligation that the party at fault should be warned at least twice, and his explanation demanded. If he persists in the same course even after these warnings he may be prosecuted.

NOTE.—The witness did not attend for oral examination.

WITNESS NO. 22.

Mr. Lalubhai Raichand, agent of the Vepar Utejak Mill, Ahmedabad.

Witness said that there were 505 operatives in his mill, including 25 females and 25 half-timers. He had electric light, but used it only at night in the cold weather. In the hot season they worked by daylight. He was opposed to any restriction of the hours of adults, because he thought they were able to work up to a total day of 14 hours, of which they spent 3 hours outside the mill. Witness did not use electric light in the hot season because his opinion was that an adult could not do more than 14 hours' work. Electric light meant greater waste at night, and there was no profit. He introduced electric light because it was being adopted in Bombay, and he thought it possible that it might prove remunerative. When they actually brought it into use it was found to be unprofitable, and so it was now used only in the cold weather to lengthen the working day at that time of the year. The present minimum age for children was suitable. Under the Act they now sent children for examination, and the child was not passed if unfit for work. He did not approve of a second certificate at 14, and his experience was that even now boys of 15 and 16 were included as children. Witness did not approve of any alteration in the present arrangements regarding child labour. The children were actually at work about 3 hours out of the 6½ that they were supposed to do. In the remainder of the time they were playing about, and they were only called in to the factory when they had to start a new doff. If they had a school in the compound his opinion was that there would always be a suspicion of the employers employing children when the latter ought to be in school. Small children ought to be allowed to enter the mill with their parents, otherwise they would have nothing to eat. Children as a rule were taken into the departments where there was no machinery and no danger to their health. The employés Mr. Lalubhai Raichand. *Oral evidence.*

Mr. Lalubhai Rai-chand. were independent, and dictated their own terms. If they did not want to work at night they would not, and witness, when requiring them to so work, had to pay one and a quarter times the daily rate of pay. Operatives took their food at 10 o'clock, and had four meals a day.

NOTE.—The witness did not prepare any written evidence.

EVIDENCE OF MILL OPERATIVES.

NOTE.—The evidence printed below was taken personally by the President, or by the President and the Hon'ble Mr. Vithaldas D. Thackersey. The witnesses were chosen by these gentlemen from among operatives returning to their homes in the evening, and they were examined in such a manner and in such circumstances as to preclude all possibility of tutoring, or of the exercise of any undue influence.

Evidence of mill operatives. Sheikh Dost Mahomad, age 40, musulman, weaver in the * * * * mill, Ahmedabad, stated as follows :—

I have been working in Ahmedabad factories since I was a boy—for the last 32 years. At first work was much easier and hours were shorter, but recently our working hours have been lengthened and the temperature of the mills is kept up by closing the windows and using steam so that we have to work in great heat and are exhausted—so much so that at times men faint in the hot weather and have to be taken home in carts. The * * * * and * * * mills are specially bad in this respect. All the mill hands in Ahmedabad are unanimous in wishing that the hours of work should be restricted. At present we do not get a single hour of daylight at home: those mills which have not electric light work from sunrise to sunset, and those with electric light work on till 8 or 9 P.M. often. We find that the electric light injures our eyes, but men in mills where it is installed have to work long hours by it otherwise they would lose their places. We also complain that the mills humidify with steam, instead of with cold water, thus rendering the atmosphere oppressive: this is done even in the hot weather. We also complain that in many of the mills the drinking water-supply is from wells more or less impure, the mills, shutting off the supply of municipal water from the taps so as not to have to pay for it. In the * * * * mill we are made to drink well water for most of the year—it is neither good nor clean. If it is a choice between a 12-hour fixed day all the year round, and an *average* 12-hour day, shorter in winter and longer in summer, then we are all in favour of the *average* 12-hour day, because we do not wish to work by electric light at any cost—it injures our eyes and we wish to work by daylight only. We would rather do the extra hour in summer than work by electric light for even an hour in winter. We also ask for a holiday, *every Sunday*, whatever Hindu holidays may be given. We sometimes have to work for 10 or 11 days at a stretch and find this exhausting. We want a holiday every Sunday at all costs.

The following weavers stated that they concurred in the above views :—

Haribhai Narotam,	30	years,	*kunbi*,	* * * * mill.
Shankar Ramdas	25	„	*kunbi*	* * * mill.
Amirkhan Mekrabkhan	35	„	*musulman*	
Pirbhai Lalubhai	22	„	„	
Ganpal Dalpat	28	„	*kunbi*	
Tribhovan Dungar	25	„	„	* * * mill.
Bapalal Pirana	20	„	„	

Rasulbhai Mustafakhan, age 30, *musulman*, weaver in * * * mill, Ahmedabad, stated :—

I have been working in mills for the last 15 years. I earn ₹11 or ₹12 a month in the cold season, and ₹14 in the hot season. At present the mill does not work by electric light, though an installation has been put in; but if night work is introduced most of the *musulman* weavers will leave and go elsewhere. We can get work in other mills. Work by electric light is said to injure the sight. Weavers from any quarter who worked by electric light in * * *'s mill say that their sight is injured so that they cannot see as well as before in daylight: many of them accordingly left that mill, but there are generally others ready to do night work for the extra pay. Sooner or later a man who works by electric light must suffer in sight. We strongly object to work at night. In case a 12-hour day is fixed by law, we should much prefer to go on, as at present, working shorter hours in winter and longer hours in summer, so as to make up an average of 12 hours, rather than work 12 hours every day throughout the year. Of course, I would like shorter hours than at present, in the hot weather. We are quite exhausted at the end of a long day's work; but rather this than work by electric light in winter.

Gangaram Kandas, age 25, and Asa Ranechond, *kunbi patidars*, weavers, in the same mill, say :—

We agree with what Rasulbhai says. We wish to add that mills ought to be made to provide shelters or rooms where the workers can eat their meals. We *kunbis* are put to great inconvenience in finding a place to eat our food outside, where we can avoid contamination by lower castes.

BROACH.

Witness No. 23.

Mr. H. W. J. Bagnell, I.C.S., District Magistrate of Broach.

Mr. Bagnell, I.C.S. *Written evidence.*

The working hours of adult males should be limited to 12. The physique of workers has undoubtedly been affected by long hours, as can be seen from the worn-out, overworked, harassed appearance of many of the workers, especially of those who cannot afford to or do not take sufficient rest from time to time at their homes and villages, involving either a complete cessation from work, or else a change to light field work in the open air. The workers know well that without such relaxation they do and must break down completely. Even with a 12 hours' day such rests will be occasionally needed. However much the Indian operative may be inclined to loaf and run out to get a drink or try and smoke a *bidi*, he is, as it were, tied down to his machine, and in most cases cannot and dare not leave it for any interval that can give him an appreciable amount of rest; whilst the noise of the machinery, the constant motion of his body and limbs in his work, the unremitting attention to the operations of his machine, the heated atmosphere often full of dust and cotton fluff, the fact that he is paid mostly by piece-work, all combine to wear down his body far more than in most other fields of labour, so that you can generally tell a mill hand and could pick him out nearly always when mixed up with a lot of field labourers from his exhausted appearance. I would therefore limit the hours to 12, without any exception to permit of overtime work, which will only lead to abuses and excessive work. A working day should be fixed at not more than 12 hours, exclusive of the midday rest, the manager being given the option to fix the actual times of work between sunrise and sunset. The working hours should be notified for a month in the same letter in which the manager notifies to the District Magistrate the days in the month on which the mill will not be working. The engine should be stopped for half an hour between noon and 2 P.M. In factories working on the day shift system the working hours should be from 5 A.M. to 8 P.M., provided no adult male should work for more than 12 out of the 24 hours. There has been physical deterioration of persons between the ages of 12 and 14, both as the result of illegal employment as full-timers, and of the strenuous labour of work at mules and spinning frames at such an early age, even when such persons are strictly employed as half-timers only; but I consider that with the certificate of physical fitness it is unnecessary to create a special class of workers intermediate between the half-timer and the adult, whose working hours should be restricted. With such a certificate excluding children physically unfit, it is undesirable to create the great confusion and difficulties which would arise from an intermediate class in the complete co-operative working of the whole machinery, and of each department in the mill. I would strongly recommend such a special register as the recent Committee proposed [point *(d)* of points of reference]. I would prohibit the employment of women by night, entirely. This would probably drive 20,000 women working in gins out of employment, but their excessive work for at least 1½ months each year, for periods of 17 to 18 hours in the 24, in the midst of clouds of deleterious dust, and helped out in such work their children, is an abuse justifying the prohibition. Children should not in any case be worked at night. The minimum age for children should be raised to ten, unless employed as half-timers in the reeling room only. Certificates of both age and physical fitness should be most certainly required before children are allowed to work in factories. No child should be permitted to continue to work for more than six months at a time without a renewal of such certificate of physical fitness. Similarly, certificates of fitness to work as full-timers should be insisted on before half-timers are allowed to work full-time as adults, and for the first two years of their employment as such physical fitness certificates should be renewed each six months. The age for full-timers should be 15. The employment of children should be limited by law to work in regular sets, whether morning and afternoon or double sets. I think that the proposal to force factory owners to provide elementary education for their workers at their own expense is out of the question, and quite an unjustifiable interference with the trade. It could also be used as a means to employ half-timers for full-time when there was a press of work, and little chance of detection. Non-working young children should be prohibited by rule from accompanying workers to dangerous or unhealthy parts, of the factory, by a penal clause for the infraction of such a rule. The usual amount of moisture for the air, in accordance with the climate of the place, which is required for manufacturing processes, is probably not such as to adversely affect the health of the workers. In the hot weather especially and at all times, the weaving shed where air is artificially moistened is the best ventilated and coolest part of the mill, whilst in the spinning department the moisture is never so excessive as to injure any one. Millowners are careful enough to apply only so much moisture as is absolutely needed to work the cotton, and from my 3½ years' experience as factory inspector in Bombay I did not find this complained of as so injurious as to affect the health of the operatives. I would not prescribe a standard of purity for humidifying water. If the water so used is impure, evil smelling or otherwise, a warning from the medical inspector should suffice, and a charge of general insanitary working could be brought and substantiated, and a conviction secured. The standard of latrine accommodation should be raised to one seat for every 25 workers, the provision of separate urinal accommodation should be insisted on, and the use of a certain amount of an ordinary disinfectant in the latrines *per* day *per* worker exacted, an option being given of disinfectants and quantities. All doors of working rooms should be hung so as to open readily outwards. In gins which do not come under the Act much of the machinery is not properly fenced. I do not consider that the strapping which drives the wheels of shafts in mills, and in most factories, is sufficiently guarded, especially when the worker has to go and oil the shafting wheels. I would being gins under the Act by amending section 2 thereof. A small manual of the necessary guards to all machines used in factories should be drawn up by a committee of expert factory inspectors and issued to all agents with a warning that machines remaining unguarded after receipt of the manual would involve prosecution without any further notice. Arrangements should be made to secure uniformity in the administration of the Act throughout India. This should be done by conferences of expert factory inspectors for each Province

. Bagnell, I.C.S.

from time to time. In the Presidency towns, or where there are sufficient factories to fully fill up the time of a full-time medical inspector, I would strongly recommend the appointment of such experts. They should be appointed in Bombay, and possibly Ahmedabad.

al evidence.

Witness stated that he had been three years at Broach, and fourteen years ago he was for three and a half years factory inspector in Bombay. In his opinion mill operatives deteriorated in physique owing to the long hours of mill labour, and they also suffered in health. They drank a good deal, but he did not think they drank to excess. He considered that the agricultural *bhils* drank more than mill-hands. Constitutionally, the operatives suffered from long hours. He put twelve hours' work as the limit, it was as much as a native could stand. Witness suggested allowing the owners to fix their own twelve hours, of which they would have to give notice. He did not approve of sunrise to sunset working, which permitted fourteen hours' work at the hottest time of the year. Witness would put the minimum age for children at ten. They could obtain outside work during the extra year, which would be healthier and not so arduous as mill-work. Most half-timers might be doffers, but in Broach some were on piece-work. If schools were established care would have to be taken to prevent the jobbers from taking the children out of school. He agreed with raising the working hours of women to twelve, which would be a great help to labour. Most ginning factories were not under the Act. Their normal working day was from daylight to dusk, but when the pressure came, then the working hours were enormously long. A man was in charge of one gin, and was paid by contract. He did not work continuously, and could go away for a rest provided he arranged for someone to take his place. He approved of giving compensation for injuries, which would make owners careful about the fencing of machinery. Witness quoted the case of some presses at Pálej where the sanitation was very bad. He thought gins and presses should be brought under the Act, which should insist upon improved methods of sanitation. The present state of affairs was solely due to the lack of legislative control. If ginning presses were brought under the Act he did not think that those in Pálej would be removed to Gáekwári territory. There was a scarcity of labour in ginning presses, because labour was required at the same time for the fields. Certain classes would not touch the work in gins. The *bhil*, for instance, would not leave the fields to enter the gins. Even if the working hours of labour in gins were restricted, he thought that sufficient labour would be forthcoming if owners would pay adequately and take more care of their hands. During the two months that the pressure lasted sweating conditions existed, and in his opinion this sweating could be obviated if higher wages were paid, and greater interest evinced in the hands. He would prohibit the employment of women in gins at night. He considered that ginning was the most unpopular form of labour that there was, and the pay was not sufficient to attract men from the mills. Even if sufficient labour was not forthcoming, that did not justify sweating. Witness did not consider that his written reply was in any way extravagant.

Witness No. 24.

Dr. J. S. Fraser, Officiating Civil Surgeon, Broach.

. Fraser.
itten evidence.

The working hours of adult males should be limited to a maximum of twelve hours. Their physique has been affected by working long hours. The engine should be stopped for half an hour between noon and 2 P.M., and in factories working on the day shift system the legal hours should be from 5 A.M. to 8 P.M., with a maximum working day of 12 hours. I don't know that the deterioration noticed is due to the illegal employment of children between the ages of twelve and fourteen, but I don't think a special class of "young persons" should be instituted such as is referred to in the questions. A special register of all workers under the age of sixteen should be maintained in order to facilitate inquiries as to the physical fitness of the youngest adults to work full-time. The employment of women at night should be prohibited. The minimum age at which children are allowed to work in factories should be raised beyond nine. Certificates of both age and physical fitness should be required before children are allowed to work in factories. Similarly, before children who have hitherto worked half-time are allowed to work full-time as adults, certificates of both age and physical fitness to work full-time should be required. It should be prescribed by law that children shall not be employed except in regular sets, whether morning and afternoon sets or double sets. Factory owners should not be obliged to provide elementary education at their own expense for children working in their factories. A rule should be made prohibiting non-working young children from accompanying workers to dangerous or unhealthy parts of factories. The rule should be enforced by a penalty on the occupier. An attempt should be made, by testing samples of air taken from factories in India, to prescribe an analytical standard of purity for air, in factories, with a view to secure proper ventilation. A similar attempt should be made to prescribe a standard of moisture for the air in factories, with reference both to manufacturing processes and to the health of the workers. A standard of purity should also be fixed for the water used for humidifying purposes. The standard of latrine accommodation should be raised to one seat for every 25 workers, and the provision of separate urinal accommodation should be insisted on. It should be prescribed that all doors of working rooms shall be hung so as to open readily from the inside outwards, in case of fire. Further precautions for fencing machinery are necessary in seasonal ginning factories. Arrangements should be made to secure uniformity in the administration of the Factory Act throughout India. Full-time medical inspectors of factories are not required to *assist* the present inspectors in securing the due observance of the Act. I have experience of all classes engaged in textile and ginning factories. I cannot supply the Commission with statistics showing the relative healthiness of these operatives as compared with the general non-factory population of the same class. I am inclined to think that factory work is detrimental to the health of a number of children who, under a system which imposed a standard of physical fitness before admission into a factory, would never have been admitted to work, and also to a certain number of children who break down under the strain of the work. As regards those who have attained the status of manhood I am of opinion that a proportion of those, too, shows signs of impaired health greater in

amount than, say, men of the same class engaged in agricultural pursuits or domestic service. This does not hold true as regards women employed in textile factories in Broach, where they appear to be engaged in spinning and reeling on piece-work, but it does with regard to women employed in seasonal ginning factories. The physique of the factory population is below the general average of the same class. They appear to suffer more from respiratory troubles, especially among those employed in seasonal ginning factories. I cannot supply any statistics The best means of determining age is by considering dentition, height and general development, in the absence of a birth certificate. The dentition test cannot be relied on in India. I have no knowledge as to the extent to which the law regarding the employment of children is evaded, if at all. Whole-time medical inspectors should be appointed. They should be recruited in Great Britain from among medical men well experienced in factory work, and the diseases incidental thereto, and from such of those medical officers sent out on temporary plague duty by the Secretary of State as have similar qualifications as regards Indian factories and factory life. They should be recruited and retained specially for factory work. The pay should start at R 1,200 a month: they should not be allowed private practice. They should form part of the Department of Commerce and Industry, and be immediately subordinate to the Local Government in which they are serving, exercising within their own areas control over all other inspectors. I consider that seasonal ginning factories in this district should be brought under the Act. Dr. Fraser.

Witness stated that he had been 18 months in Broach. It was his opinion that as a class mill-operatives were not as strong as those in outside employments. He attributed this to the long hours worked in the mills, but had no statistics to prove that there was greater sickness among mill-hands He thought that 12 hours should be the maximum working day. The present long hours were fatal in the long run, and undoubtedly prevented the operative from reaching an advanced age. He had seen phthisis among women who worked in ginning factories. Among this class phthisis was more general because they worked in an atmosphere heavy with fluff, and during the busy season the hours were very long. Healthy persons of mature age could work without ill effects, but any one at all weak would be liable to suffer in health. Witness had not seen phthisis to any marked extent among mill-operatives. Mill-hands had complained to him of defective eyesight, which they attributed to working by electric light. He did not altogether agree with this, but admitted that the electric light might be a factor. Children undoubtedly suffered in health through working long hours. Their physique was affected and their power to resist disease was diminished. His general impression of the effect of long hours on mill-operatives was that as a class they did not live so long as those in outside employments. They might see in the mill men who looked old but who really were not old. In the age test for children he considered height, development and dentition. He rejected very few children, because they did not appear for examination until they knew they were about the required age. He did not consider that a boy was equal to half a day's work at the age of nine, taking into consideration the possibilities of his being employed for more than half a day. He did not consider work outside as arduous as mill-work, and it was after all work in the open air. He believed in the legal restriction of hours because in no other branch of life did they find men who were made to work "round the clock." Such long hours were detrimental to their health, and in the hot weather especially no one could work continuously for 12 hours without affecting his health. He did not consider the weight test of physical condition of practical utility unless they weighed operatives who had worked for a year at these long hours. He had no statistics to prove that factory labour was injurious to those who worked long hours, but he based his opinion that it was so on his observations in Broach, both inside the mills and also on seeing the men returning from work. Witness did not altogether favour the proposed "young person" class. He thought the object would be met by directing that until a child was clearly able to work a full day his name should be kept on a special register. A child could be kept under observation until he was 16 years of age. He would have rejected about one out of every eight boys on the score of physical unfitness, had there been a test for that. Factory owners ought not to be obliged to provide elementary education for the children. He personally entered the distinguishing marks on the child's age certificate, though not invariably. He thought that the civil surgeon should do so. Children should not be allowed to accompany their parents into the ginning factories. The atmosphere was injurious to the child, and if the prohibition were applied he did not think it would take away the means of livelihood of the mother. He saw no harm in children going with their mother into the reeling room of a mill. A special ward had been set apart in the Broach Hospital for patients suffering from ulcers. Factory hands were among the patients, but not to any noticeable extent. He was inclined to think that the starting of the ulcers was not due to mill work. They might possibly be traced to the water that was used in bathing, and to uncleanly habits. The long standing at mill work would favour the development and continuance of ulcers, once started by an abrasion on the leg. Latrine accommodation should be one in 25. He had complained about the state of the latrines. His complaints were forwarded to the Chief Inspector of Factories, and he never heard of them again. Sometimes the matter was attended to. He approved of full-time medical inspectors who should be independent of the present factory inspectors. If a child were rejected for mill work there was no reason why he should not get light employment elsewhere. Often there was no necessity for the boy to work. On one occasion a boy came up several times to be examined; afterwards it transpired that this boy was the son of a *pattawalla* in Government service. His father was well able to maintain the lad, and there was no reason why he should have gone to mill-work. Witness chiefly relied upon the general physique of a child when passing him, and his caste had to be taken into consideration. In his opinion a class of "young persons" would mean running the mill only during the hours that they worked. If they made a physical examination necessary before a child could work full-time, they would attain the object of the proposed "young persons" class without upsetting the work of the mill. He would put the minimum age for children at ten. He maintained his opinion that there had been a general deterioration in the physique of mill-workers. On returning from work they were listless and tired, and many were anæmic. He did not consider the weight test a fair one until they could produce men who had actually and continuously worked for the period of one year in a mill. For instance the agricultural *bhils* contrasted more than favourably with mill-hands. Witness admitted that the operatives drank, which fact had to be considered when dealing with questions relating Oral evidence.

Dr. Fraser.

to their health. Even though their work was not continuous, and they had frequent intervals of rest, he still considered that a 12 hours' day was sufficient; long hours undoubtedly had a tendency to diminish their power of resisting disease. He could not quote statistics from the hospital because mill-hands as a rule did not become in-door patients.

Witness No. 25.

Khan Bahadur Adarji Mancherji Dalal, Broach.

Khan Bahadur Adarji Mancherji Dalal. *Written evidence.*

I have been connected with the cotton industry for 30 years as a director of several joint stock companies. I think working hours of adult males should be limited, due regard being had to the conditions prevailing now in India in the labour market. The restrictions imposed should be such as to allow the textile industry to expand without retarding the growth of the physique of the operatives, or their wage-earning capacity .The natural tendency of prolonged hours, in all kinds of labour, is to affect injuriously the physique of workers. Whether or not it has affected the present operatives I cannot positively assert. Before one could assert that the health of these people has been gradually going down, and their physique undermined. a careful and systematic series of observations from compiled statistics, extending over a series of years, would be necessary. Mere casual hearsay or popular belief alone should not be taken as clear evidence in support of "deterioration." Except the general tendency of all mill labourers to be less robust than labourers in fields and other out-door occupations, and a popular belief of this nature, I cannot positively assert that this running down of their physique has been going on from year to year. But in spite of absence of positive proofs, in my opinion, inferences are in favour of "deterioration," and therefore a slight limitation of the working hours would be advisable. I think a 12 hours' limit should be fixed, the hours being regulated according to long and short days at the discretion of mill managers Except when working by shifts, the legal working hours should be from 5-30 A.M. to 6 P.M. The engine should stop for at least half an hour between noon and 2 P.M. I would recommend 45 minutes. In factories working on the day shift system the legal working hours should be from 5 A.M. to 8 P.M. with a provision that no adult male should work more than 12 out of the 24 hours. There is no necessity for the creation by law of a special class of workers intermediate between half-timers and adults. It would be impracticable, and would confer a doubtful concession on this class, and would be unworkable. Even if the "physical deterioration" theory be established, this change should not be made. It would be advisable to maintain a register of all workers under sixteen. I would not advocate *absolute* prohibition of the employment of women at night. That would entail hardship in many cases. Married women with children as a rule do not seek employment and are not tempted by higher wages to work at night. In all parts of India, even in easy domestic service, such women make it a condition that they must be allowed to go home after the sun has set, and they throw up their employment if night attendance is insisted on. However, in certain cases widows who have no children to look after do often require this help to earn a wage, or to enable them to relieve their brothers or relatives in shift labour, and in ginning factories the proportion of men and women being nearly equal, and these factories having to work high pressure and overtime for about a month or a month and a half during nights, the prohibition would curtail the wage earning capacity of this class, and at the same time put an unnecessary restriction on the ginning industry. It would be advisable to make the law elastic so as to prohibit women from working at night in the mills where work is more difficult and surroundings less healthy; but in ginning factories and in other less exacting classes of work a proviso should be inserted to allow them to work at night. But out of the 24 hours of the day they should not work for more than 12. The minimum age at which children are allowed to work in factories should not be raised beyond nine. Popular opinion is that nine is a very tender age for mill work, and that a year more should be occupied at school or in play for the growth of their physique. The mill class of children as a rule do not attend schools, and without supervision and control of their parents or guardians they loaf about and fall into evil habits, and they would be more profitably employed in work and begin to earn a wage. Certificates of both age and physical fitness are in my opinion very necessary. Unhealthy and ricketty children should be prohibited admission to mills, and therefore certificates, both of age and physical fitness, should be required before children are allowed to work in factories. Similar certificates should be obtained before a half-timer is allowed to work as an adult All children should be employed in regular sets prescribed by law. It should be obligatory on the part of factory owners to provide elementary education at their expense for children working in their factories. The imposition of this responsibility would have far reaching beneficial effects on the mill and factory operatives, and ultimately its good effects would be perceived by the employers of labour in regularity of attendance, better discipline, and healthier moral tone. It will be a pleasant diversion from physical work to mental occupation, affording an agreeable change and rest. A separate room, in an open shed, will conduce to their health. Children from 9 to 14 should be taught reading, writing, simple arithmetic, simple economic geography, object lessons, simple sanitary lessons, and some religious lessons; in cases of Mahomedans to learn the Korán. It has been found that the undermining of their physique and moral tone is more due to total ignorance and bad company, leading to most licentious habits, drunkenness and theft, than to the nature of mill and factory labour, with its incidental unhealthiness. Mill operatives have earned a notoriety for moral depravity, rowdyism and disorder, and therefore I cannot too strongly recommend that this salutary proviso should be enforced. The cost is not such as to affect mill-owners' balance sheets. One or two teachers costing R15 to 20 *per mensem*, or a *moulvi* on a small salary to give lessons in the Korán would exercise a most salutary and healthy influence in a few years on the operatives, without hampering the industry or putting any burden on it. Mill proprietors spend thousands of rupees in wages *per* month, and surely they will not grudge a few rupees to educate their operatives. The hours of attendance at the class should be moderate, and in my opinion should not exceed 2 hours—one in the morning and one in the afternoon—out of which 15 minutes should be allowed for play and gymnastics. Suitable regulations should be drawn up prohibiting non-working young children from accompanying workers to dangerous or unhealthy parts of factories. This

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should be done by not admitting them into the interior of the building, except in the reeling room, but a shed should be provided in the compound near the school-house for the children of these operatives who work in the dangerous or unhealthy parts where they can rest and, if grown up, attend the school-class. It would be difficult to fix a standard of purity for the air for all mills. India is a continent having a wide fluctuation in temperatures, etc. A standard for North India may not suit the plains and *vice versâ*. It will be sufficient if the air is renewed and the medical inspectors are authorised to arrange for proper ventilation. So also for moisture no standard is necessary. Climatic conditions in the United Kingdom are entirely different from those in India, and any hard and fast regulations would interfere with the manufacturing processes without doing any good to the workers. A standard of purity for humidifying water may be enforced, because if dirty and stagnant water from tanks and reservoirs were to be used, it might affect the health of the workers if the water contained the germs of epidemic diseases, and more so in mills or in a factory where the operatives are more liable to infection than in other places. One latrine seat for every 25 workers should be provided, and separate urinal accommodation should be insisted on. It should be prescribed that all factory doors should open readily outwards. It is a good provision in case of fire. Further precautions for fencing machinery are necessary where there is a risk of accidents, especially so in ginning factories. Arrangements should be made to secure uniformity in the administration of the Factory Act throughout India, due regard being had to local conditions, habits and climates. For this purpose, conferences of expert factory inspectors from each Province should be held from time to time. Full-time medical inspectors may be employed for large industrial cities such as Bombay and Ahmedabad, where there are sufficient factories to occupy fully the time of the inspectors. But they are not needed in other less important towns. Some reasonable time-limit should be allowed within which operatives should be permitted to work pending examination for certificates of age and physical fitness. I suggest that that period should be about 4 or 6 weeks. If the employé has any latent infirmities or undeveloped disease it would manifest itself, and the examination would be more perfect; and if the employé finds the nature of the work unsuitable and exacting, he or she would of himself or herself throw up the job. In order to secure medical examination of half-timers and of any other employés with reasonable despatch, I would suggest that before the limit prescribed by law for the children to work, the mill manager should notify the medical inspector, fixing time and day and keeping such employés ready for examination in the premises. But the medical inspector should also pay surprise visits to detect irregularities or evasions of the law. It will be very difficult to apply in practice the principle that no half-timers shall be permitted to work as adults unless medically certified as fit for full-time work. Safeguards will have to be adopted with the object of preventing half-timers who are refused certificates as adults in the factory in which they have worked from obtaining employment as adults at some other factory. The ordinary precaution of notifying the disqualification to other mill managers in the same town or district with the names, features and marks of such operatives will be some check. But if they seek employment in other districts, this safeguard will be of a doubtful character But if it is insisted that employés seeking work at another factory as adults shall be re-examined medically before allowing them to work as full-timers, and penalising both the employé and the employer, some check may be exercised. The cotton ginning and pressing industry, which carries on urgent work, cannot have the hours of labour prescribed (the whole cotton crop having to be disposed of in as short a space of time as possible, for home export, and for fear of deterioration in quality and price by delay). It should be specially treated, and elastic rules should be framed to exempt it from the hard and fast law. The gins, being in large compounds, are healthy, and the factories are well ventilated, and the work is easy and not exacting. Field labourers after they are free from agricultural operations get an easy wage in these factories, and therefore special consideration should be shown to this class of industry. If it is included in the legislation with other textile industries, it would be an unnecessary restriction, and more so in times when labour is scarce as has been the case these last two or three years. In ginning and pressing mills the hours of work for male adults should be left undefined, but for children between 9 and 14, and for women, the maximum limit should be fixed at 12 or 13 hours, and women should be permitted to work at night, provided they have not worked the maximum hours during the day. Inspectors from the United Kingdom would not suit Indian conditions, and I recommend that only those who are acquainted with conditions of mill labour in India should be recruited in India. But in the beginning if one really good inspector from the United Kingdom were employed for each Presidency, or according to the number of factories each Presidency contains, for 3 years, as soon as the new law is enacted and applied, these men would organise the staff under them so that the training of the latter would be nearly as good as in England, with the advantage that they will be familiar with local conditions and circumstances prevailing in each Presidency. I consider it essential that any law that may eventually be introduced should certainly allow a wide elasticity in its actual operation. British Indian textile and other industries have to compete with those in the Native States where such restrictions will not be introduced. In the East, India has to compete with China and Japan, and the aims and objects of the Lancashire mill industry are not strictly humanitarian and philanthrophic. I advocate a wise and moderate interference in the beginning, but with great caution and foresight lest in trying to improve and better the condition of operatives the intended legislation retards the expansion of this industry, which ultimately will adversely affect the operatives in whose interests it is intended to be introduced. Labour is now difficult to obtain. The mills have already been handicapped in this matter. The conditions have changed, and, as time advances, this scarcity will be more and more perceptible. I would bring to the notice of the Commission the extreme indebtedness of the mill operatives. They do not get their wages every day or every week, and they must borrow to maintain themselves until the wage is received. This system leads to borrowing at exorbitant rates of interest. Banias, Parsis and even the clerks of the mills lend money at usurious rates of interest at 1 anna *per* rupee *per* month, or 75 *per cent. per annum*. As soon as wages are paid, these lenders prey like vultures on the operatives, and appropriate a good share of the wages. This evil can be got rid of by education and thrift, but the work-people should have some money to live on during the interval, and the employers of labour should open in their office a separate department to be called "Anticipatory Wages Lending Bank" to lend money to the operatives at a reasonable rate of interest, say 6 *per cent.* The wages of the operative should be hypothecated to the bank

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for the loan taken, and he should be bound to the bank to discharge the debt either in cash or by set off in wages before he can get his discharge from the factory or seek employment in another factory. The system and principles of *tagavi* advances to the ryots may be introduced in the industrial towns. The credit of the operatives would be restricted and usurers would not lend them money when the wages of the operatives are pledged to the bank. The bank may also open credit accounts and allow interest for credit balances and thus encourage thrift amongst the operatives. This is a mere suggestion. How it is to be applied in practice and the manner in which it should be introduced by legislation I leave to experts and to the members of the Commission to decide.

al evidence.

Witness said that he had been a director of mills in Bombay and Broach. He had now no interest in any mills, but he had a few shares in gins. He did not see any material difference in the health of the operatives when contrasted with a few years ago, but outside work was healthier than mill work. As a class mill workers were not declining in health, but they were not so strong as field labourers on account of the nature of their work. A 12 hours' day was sufficient. The hands had not so far complained of long hours, but by and by he thought they would realise the power of combination. Ginning factories worked from 5 A. M. to 10 P.M. The husband and wife worked alternately, and were paid so much *per* gin. It was easy work. Legislation might be applied to fencing, ventilation, and sanitation, but there should be no restriction of hours in gins If the Factory Act were applied to the gins in Broach, they would be driven into Gáekwári territory. The ginning industry was not paying, and the presses even now were being taken across the border into Gáekwari territory. The Gáekwár placed an export duty on all cotton brought into British territory for ginning, but cotton ginned in Gáekwári territory could be brought out duty free. The Gáekwári gins were about two to three miles from those at Palej Witness had heard of no accidents to women through working in front of the opener. The Act might be made to apply to gins, except in regard to hours of labour. He did not think that a 12 hours day would have an adverse effect on the cotton industry, and in his opinion the present long hours were the result of competition amongst mill-owners, who were unable to agree to a definite limitation of hours. He tried introducing elementary schools some years ago, but the idea was then novel and people laughed at it. If mill-owners entered into the matter whole-heartedly their schools would be a success. Parents might be indifferent at first, but he advocated compulsory attendance on the part of the children. Mill-hands had a bad name for immorality.

Witness No. 26.

Mr. R. B. Thornley, Manager of the Whittle Mills, Broach.

, Thornley. *itten evidence.*

The working hours of adult males should be limited. I do not approve of working by electric light, unless by double shifts. I do not consider a working day from sunrise to sunset too long for adult males, with the present pass system of allowing one man in eight to be away from his work at times in the *bidikhana* or drinking water. I do not think the physique of the operatives has been specially affected by long hours on account of these intervals. I would suggest that the hours fixed be from sunrise to sunset, or, if hours are to be limited to 12, the time of working should be left to the manager, who might prefer to give a longer rest in the middle of the day. The engine should be stopped for half an hour in the middle of the day. If the factory works on the day shift system, the legal hours should certainly not be fixed from 5 A.M. to 8 P.M. That would cripple industries like the gins. Nor would I limit an adult's hours to 12 only. There has been no physical deterioration from the illegal employment of children in our mills, as we are very strict about employing children as half-timers only. I do not consider that there is any general physical deterioration amongst the half-timers, nor would I create by law a special class of workers intermediate between half-timers and adults corresponding to young persons, because the mills would have to be shut down for the day when the young person's hours of labour were over. I would not have a special register of all workers under 16. The number of women, half-timers, and young persons would determine the hours the mill could work; the hours would be shortened, male adults would get less wages, the outturn would be less, and the industry would be crippled. The employment of women at night should not be prohibited. I would not raise the minimum age for children out in India. It would be too hard to take this source of livelihood from children of nine. Certificates of both age and physical fitness should be required before a half-timer is first employed, but not prior to the employment of a half-timer as an adult. The child should be allowed to work in the mill for a reasonable time, prior to examination, where a doctor is not available daily. Children are examined here with all reasonable despatch. We work our children under the system of regular sets, as ordered by the factory inspector, and it should be so prescribed clearly by law. Factory owners should certainly not be required to provide education at their own expense. Non-working young children should not be admitted to dangerous or unhealthy parts of factories, but I can give no opinion as to how such a rule should be enforced. I do not think standards for purity of air and moisture are necessary. I doubt whether in India the moisture that is used for weaving and spinning is so excessive as to be injurious to operatives. It does not even nearly equal the monsoon moisture, and we stop all artificial means of humidifying in the monsoon. I think that some standard of purity for humidifying water might be fixed, but not necessarily a standard of potability. It is not necessary to raise the latrine accommodation as high as one seat for every 25 workers. Separate urinal accommodation should be insisted on All factory doors should open readily outwards. No further precautions for fencing machinery are required. The administration of the Act should be uniform throughout India. It is very desirable for many reasons that full-time medical inspectors should be appointed. English factory

inspectors are not required; it is important to have men thoroughly acquainted with the conditions of mill labour in India. The mills employ the following numbers of operatives:— Mr. Thornley.

	No. 1.	No. 2.	No. 3.
Male adults	304	270	422
Female adults	117	70	70
Boys	150	107	16
Girls	30	8	4
	601	455	512

Witness stated that he had had twelve years' experience in the mill industry in England, and nearly 10 years in India. He had never worked by electric light. He thought that the operatives should work by daylight. Under this system the longest hours came at the hottest time of the year, but the work was not continuous. There were 14½ hours of daylight in the hot season, and he thought that the operatives could stand that amount. He had never seen operatives so exhausted as to require assistance when leaving the mill. Many of the Broach operatives suffered from ulcers on their legs, but he could not say whether this complaint was confined solely to mill operatives. Witness had not formed any opinion as to the proportionate amount of work produced in the short and long days, as so many factors had to be taken into consideration. They got more production in the long hours, but whether it was proportionate or not he could not say. A fixed 12-hour day would mean the introduction of electric light, and this would be a temptation to work longer hours by shifts. He thought that mill-owners would want to work 12 hours if that number were fixed, and would not be content with 11½ hours in the cold weather, even though giving up the extra half hour would save the expense of an electric light installation. His men were chiefly employed on piece-work. In his opinion the hours fixed for the proposed class of "young persons" would determine the working hours of the mill. The registration of the young persons up to the age of 16, even without any limitation of hours, would necessitate the keeping of an extra register. He would like to have an interval in the morning for meals, but considered the idea impracticable. The natives would not all come out for meals together. He objected to a long interval at midday on the ground that if the operatives were given time to go home they would not return to work again. There was a scarcity of all classes of labour, and consequently as soon as a child was of age, and wanted to work, he was employed. He knew of one instance where a child had suffered in health through being put to work too early. He approved of a physical examination for children, but not at 14 when they became adults in the eye of the law. At 14 the youth could take care of himself, but at 9 the child was very often driven into the mill and required protection. At the age of 14 the youth was largely independent of his parents. If they had fixed working hours he saw great difficulty in any attempt to be stricter with the operatives. Personally he liked the idea of two short intervals, but was sure that the operatives would leave the mill to smoke and loiter about just the same. With the mill labourer as he was at present witness did not see how this waste of time could be stopped, and the restriction of hours would hurt the industry. He had not noticed that the operatives went out more often in the long-hour days. In his opinion they took as much time off as they possibly could at all times of the year. He allowed one in eight passes, which is about 12 *per cent.*, and over one and a half hours were wasted each day. In fact as soon as the operatives arrived they began to use the passes. If the hours for men were fixed at 12, those for women could be similarly fixed. This would benefit the supply of labour, but if the one and a half hour interval of the women were retained, the concession would lose its value. He considered that women were capable of doing 12 hours' work *per* day. The mill could not make other arrangements if the hours of the men and women did not coincide. In his mill the women took their hour and a half in one half hour and four quarter-hour periods. Generally speaking the women did not loiter as much as the men. The male operatives took their passes and were out for a period each day similar to that which the law allowed the women. In his mill each individual worker knew exactly the basis on which he drew his wages on piece-work. He was aware of no deterrent circumstances which prevented people in outside employments from entering a mill. He had occasionally found a system of *bakhshish* prevailing, but had been strict in putting it down. Piece-workers went out just as much as those who worked by the day. Operatives would not consent to stop work on one particular day in each week. They took from three or five days off *per* month in addition to the regular holidays. If absent on account of illness nothing was said, but if not they formerly deducted two days wages. Latterly, owing to the scarcity of labour, this system of fines had been discontinued to a great extent. If electric lights were introduced owners would want to get an adequate return, and this would lead to long hours' working by shifts, for the extra half-hour production during the 12 hours' day in the cold weather would not cover the cost of the installation. He did not think that he had a single operative who had worked consistently for one year. The Hindus saved money and let it out on interest, but the Mahomedans spent theirs on theatres, drink and festivals. The work-people were gradually getting free from control, and owners had to be more lenient. The men had no organisation, but they combined at times to strike for higher wages. In one mill in Broach where there was electric light the men had refused to work late hours. He did not, however, think that the work-people wanted their hours to be limited. If the men struck for their hours to be limited, then he would advise giving way to them. Witness could supply copies of the present humi y tables if such were required by the Commission. At his mill the latrine accommodation was one in twenty-five. This was quite sufficient, and he never saw any crowding. There were urinals in addition to the latrines, and the urinals were used. Oral evidence.

Witness No. 27.

Mr. Framroz D. Motabhai, manager of the Mofussil Cotton Manufacturing Company, Limited, Broach.

The working hours for adults should be limited. The physique of the workers has not deteriorated owing to long hours. I think that the working day, except when working by shifts, should Mr. Framroz D. Motabhai. Written evidence.

Mr. Framroz D. Motabhai.

be limited to 12½ hours, and that the legal working hours should be fixed from 6 A.M. to 6-30 P.M. I agree to the midday half-hour rest. We work from sunrise to 7-45 P.M. by electric light. I do not approve of this long day. We cannot get enough labour for shifts, but I do not approve of the legal working hours being fixed from 5 A.M. to 8 P.M. with shifts. We could only work with shifts for 24 hours. I think some half-timers used to work in this mill in the morning and then go to the Whittle Mill in the afternoon; but as I got their names from the manager of the Whittle Mill, I stopped this practice with threats of dismissal. There has been some physical deterioration owing to half-timers working full time, but I do not approve of a special class of "young persons" being created, as this would hinder the full working of the mill. I think a special register of all workers under 16 should be kept. I would not prohibit the working of women by night, except that I would not allow any women to work for more than 12 hours out of the 24. I would not raise the minimum age for children beyond nine, else you take the wages from children who are quite able to earn them. Certificates of both age and physical fitness should be required for children, and also for half-timers before working as adults. It should be prescribed that children must only be employed in regular sets. Factory owners should not be required to provide education at their own expense. Non-working children must be allowed to come to the mill with their mothers or other workers, but should be prohibited from going to dangerous or unhealthy parts of the factory. Such prohibition should be enforced by notice. Standards of ventilation and moisture are not necessary in India. The moisture in Broach which is used for manufacturing processes is not so excessive as to injure the workers. It is not so great as the monsoon moisture, for we stop humidifying in the monsoon. A standard of purity for humidifying water is not necessary. As regards latrine accommodation one seat for 50 workers is enough. I would insist on separate urinal accommodation. Doors should be hung so as to open readily from the inside outwards in case of fire. This should be prescribed by law. Further precautions for fencing machinery are not required. Uniformity must be secured in the administration of the Factory Act throughout India, else people will be put at a disadvantage. A full-time medical inspector is required in Presidency towns where there are enough mills to take up all his time. The Mofussil Cotton Manufacturing Company, Limited, employs 590 men, 110 women and 90 children. During the first eight years of the last decennium we worked 153 days in each year over 12½ hours, and during the last two years we worked 275 days in each year over 12½ hours. For the first period the average number of hours is 12 hours and 18 minutes, and for the last period 13 hours and 8 minutes. Some reasonable limit must be prescribed during which a child can be employed without a certificate where a doctor is not available for daily examination. I cannot suggest a period; it depends on the distance of the mill from the doctor. Fifteen days ought generally to suffice. Half-timers are examined here promptly, so I cannot give a definite opinion. If a class of young persons be created, the hours will be shortened. The proportion of women, half-timers and young persons will determine the hours the mill will work, and by shortening the hours of work decrease the wages of male adults, and diminish the mill's outturn. If hours are to be limited, I would prefer to impose a definite time-limit from 6 A.M. to 6-30 P.M., beyond which no operative could be legally employed. I think factory inspectors should be taken from persons in India who know well all local conditions. I append a statement showing the effect on production of working days of varying length:—

Working day of	Production *per spindle* per hour of 10s mule.	Production *per* spindle *per* hour of 20s reeling ring.	Period covered by these statistics.
12 hours	·59	·66	1904-05
13 „	·58	·62	„
14 „	·57	·59	„

Oral evidence.

Witness stated that he had had 25 years' experience of the cotton industry. He had been in Bombay, Nagpur, Kurla, Ahmedabad and Broach. He agreed with a 12 hours' day, during which time an operative could do his work efficiently. If given the opportunity, he thought that the men would like a 12 hours' day. Under the present system, as the hours grew longer the workmen became more careless, and the amount of waste increased. The men worked carelessly by electric light, and went home exhausted. He would not, however, say that they broke down and had to be helped out of the mill. Witness had always been opposed to working by electric light The engine-room hands worked all the time that the mill was open. The stokers were paid some on piece-work and some by day wages. They received extra pay after sunset. The health of adults was not affected by the long hours worked in the mill, and witness could not say on what grounds the working day should be restricted to 12 hours. There were no special diseases among mill-workers, and the operatives compared favourably in health with persons in outside employments. All the children witness employed had to go to the civil surgeon. There was no scarcity of child labour. Taking the production *per* spindle *per* hour, witness agreed that the proportionate production was higher in the short days than in the long days. If the working hours were reduced, witness did not think that owners could be stricter with the men, and he did not anticipate a larger output. It was possible for half-timers to work in one mill in the morning and in another mill in the afternoon. In Broach the cotton mills co-operated to prevent this. The child obtained admittance to the second mill by means of impersonation. Witness did not think that central registration would meet the difficulty. The hands were independent, and had their own way, coming to work just when they liked. Witness wanted a legal restriction of hours in order to put all labour on one footing, and not because the operatives themselves required protecting. Uniform hours would help the masters.

VIEWS OF THE GOVERNMENT OF BOMBAY ON THE QUESTIONS REFERRED TO THEM BY THE COMMISSION.

Questions for the representatives of Local Governments.

1. What is the strength, the composition, and the pay of the factory inspection establishment, in the Presidency? In what matter is that establishment linked with the administrative machinery of the Government? Is factory administration supervised—and if so, in what manner—by officers not forming part of the special factory establishment?

Answer.

Government of Bombay.

1. Bombay City has a Chief Inspector of Factories in a covenanted Civilian, who is also Assistant to the Collector, and has in that capacity other duties to perform. He is in administrative charge of the Factory Department, and is primarily responsible for the inspection of factories in the Town and Island of Bombay. This officer supervises the work of the Cotton Excise Department. He is required to exercise in Bombay the functions that are exercised by the District Magistrates in the *mofussil*. Questions whether prosecutions should be instituted or warning should be given to factory owners and managers are determined by him. The Collector is the medium of communication between Government and the Factory Department. Besides the Chief Inspector, there are three other Inspectors for the technical inspection of factories in the Presidency, *viz.*, the First and Second Inspector and the Presidency Inspector. The First Inspector (pay Rs. 400—20—500), who is stationed in Bombay, inspects factories in the city under the Factory as well as the Cotton Duties Acts. The Second Inspector (pay Rs. 300—20—400*), who is stationed at Ahmedabad, inspects, under the Factory Act, the factories in that city and in such portions of the Daskroi Taluka as lie within a radius of four miles from the railway station. He also inspects the factories at Ahmedabad, Surat, Broach and Kaira under the Cotton Duties Act. The Presidency Inspector (pay Rs. 450—30—600) inspects all factories in the *mofussil* (except hose at Ahmedabad) under the Factory Act, and also those at Poona, Sholapur and Khandesh under the Cotton Duties Act.

* The present Inspector, Mr. Chambers, gets personal allowance of Rs. 75 *per mensem*.

2. In the *mofussil* the District Magistrates are *ex-officio* Inspectors of Factories in their districts. In districts where there is a large number of factories which cannot be inspected either by the Presidency Inspector or the District Magistrate, Assistant and Deputy Collectors and *mamlatdars* are appointed *ex-officio* Inspectors, in addition to their own duties, on the recommendation of District Magistrates.

3. The work of the medical inspection of factories is performed by officers known as Joint Inspectors of Factories, who are not whole-time officers. In Bombay City the Presidency Surgeons were first (1894), appointed to be Joint Inspectors for the mills in their respective charges. As they were also certifying surgeons, this arrangement proved defective. The Personal Assistant to the Surgeon General was therefore appointed Joint Inspector for the whole Island. On the removal of the Surgeon General's office to Poona in 1907 the Presidency Surgeon, Second District, was appointed Joint Inspector of Factories as a temporary measure, pending the reorganization of the Factory Inspection

Government of Bombay.

Staff. In the *mofussil* Civil Surgeons are *ex-officio* Joint Inspectors of Factories within the local limits of the districts of which they are for the time being Civil Surgeons. These Joint Inspectors are required to visit factories once every six months. They are required to see that the rules regarding the ventilation, water-supply, latrine accommodation, &c., and the provisions of the Act regarding the employment of women and children, are duly observed. They receive remuneration at the rate of Rs. 32 a! visit for factories employing 200 persons or more and Rs. 16 for factories employing less than 200, the maximum amount to be drawn by an incumbent of the same office in any one year being limited to Rs. 2,400.

2. How is the factory inspection establishment recruited? Is there any system of training? Has the present system worked satisfactorily; and, if not, in what respects is it considered susceptible of improvement? Is it desirable that the Factory Inspectors should be recruited in the United Kingdom, or that, in the alternative, they should be trained there?

2. The Factory Inspectors specially entertained, *i. e.*, the Presidency Inspector and the First and Second Inspectors of Factories, are recruited locally. No system of training is in force, but efforts are made to obtain men with a knowledge of factory work and machinery. The system has met the requirements of the case so far. Of the present Inspectors, one was for some years Manager of an important mill in Bombay, and one has undergone training in technical schools in Germany and England. The recruitment from the United Kingdom of Factory Inspectors does not seem necessary. Such recruits would be entirely ignorant of local conditions and requirements, and migh cause embarrassment by attempting to introduce measures not suited to Indian conditions. There is nothing in the work of the Inspectors that seems at present to justify the expense of their being sent to Europe for training.

3. Is the present establishment adequate? If not, what additions are considered necessary in order to bring it up to a proper strength?

3. The strength of the present factory establishment is shown in the answer to question No. 1. The last addition to the staff of Factory Inspectors was made in 1895. Since then the Bombay City Factories have increased considerably in size and number, there being in 1906 153 factories employing 127,700 hands in Bombay Town and Island, compared with 128 factories and 96,561 hands in 1896. A similar increase has occurred in the districts of the Presidency, where factories now number 342 employing 84,937 operatives, compared with 190 employing 49,323 operatives, in 1896. A small increase of staff seems therefore necessary; and this Government are proposing to the Government of India an immediate increase of a temporary appointment, pending the receipt of the report of the Factory Commission.

4. It has been suggested that factory administration throughout India should be centralized, and that the direct and supreme control should be vested in the Department of Commerce and Industry. Is this suggestion approved?

4. This Government regards such a measure with grave doubt, and is of opinion that it would lead to a very great sacrifice of necessary elasticity in the interests of a uniformity which cannot be attained in practice. Local control must, as a rule, be more efficient than control from one centre for all India, where conditions vary widely. An adequate measure of uniformity can be secured by—

(1) the Factory Act being uniform for India;

(2) free communication between the Factory Departments of different Governments when necessary.

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The issue of separate rules by each Government provides a valuable method of keeping in touch with local opinion, and providing for varying local conditions. The Local Governments must be in a better position to exercise control over the trend of developments in factory employment than a department centralized at Simla for eight months in the year.

5. Is the proposal to employ whole-time Medical Inspectors of Factories approved? If so, should their duties include the certifying of the ages of children in factories, or should that duty continue to be performed by Civil Surgeons as at present? What arrangements would be advisable for their recruitment and appointment? What staff would be required for the Presidency, what pay is considered adequate, and should the Medical Inspectors be recruited and retained specially for factory work, or should they form part of a large service such as the Indian Medical Service, or the Subordinate Medical Service? Should they be permitted to take private practice, and in what manner should they be fitted into the administrative machinery?

5. This Government is not opposed to the experimental engagement of a whole-time Factory Medical Inspector for five years, to deal with conditions prevailing in Bombay and Ahmedabad. Such an officer, who should belong to the Indian Medical Service, and who should have knowledge of the sanitation and ventilation of English factories, might be a useful advisory officer for the Chief Inspector. The certifying of children should be left to officers of the Indian Medical Service who have knowledge of the physical development of the natives of this part of India, an essential qualification; but these officers should be specially appointed to the duty in Ahmedabad and Bombay and should also be entrusted with the sanitary inspection of factories. The duties of the Special Officer would be to inspect all factories in Bombay Island and Ahmedabad City, advising on (1) sanitation and (2) ventilation in all cases referred to him. The number of such officers would be too small to form a separate service. They should not be allowed to take private practice.

6. The Commission would be glad to learn the opinion of the Local Government, based upon the information at present available, regarding the points referred to the Commission, a statement of which is attached. They would also be glad to receive any suggestions which the Local Government may feel disposed to make for the improvement of the existing law, or for securing its better observance.

6. See below.

Section 17 requires very early amendment. It permits the penalties provided by the Act for occupiers contravening its provisions to be passed on to irresponsible subordinates and is a serious bar to the infliction of adequate penalties.

Points referred to the Factory Labour Commission on which the evidence of witnesses is desired.

(A) Adults.

(*a*) Should the working hours of adult males be limited, and has the physique of workers been affected by long hours?

(*a*) There is no evidence before Government of the effect on the physique of workers of long hours of work. In the absence of such evidence Government are unable at present to express any opinion on the question of limiting the hours of adult labour.

(*b*) If hours are to be limited, what number of hours should be fixed, and what would the best method of enforcing the restriction? Would it be advisable to prescribe—

(1) that, except when working by shifts, the legal working hours should be from 5-30 A.M. to 6 P.M. or from 6 A.M. to 6-30 P.M.

(2) that the engine should be stopped for half an hour between noon and 2 P.M.; and

(3) that in factories working on the day shift system the legal working hours should be from 5 A.M. to 8 P.M., provided that no adult male should work for more than 12 out of every 24 hours?

In the alternative what hours, and what mid-day interval, would be suitable?

(*b*) If hours are to be limited, a limit should be fixed by law. The limit must be enforced either by a limitation of the running hours of the engine, or by an alternative system of shifts to be checked by adequate inspection.

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(c) As the result of the illegal employment as adults of persons between the ages of 12 and 14, has there been physical deterioration requiring the creation by law of a special class of workers intermediate between the half-timer and the adult, and corresponding to "young persons" under the English Act, whose working hours should be restricted?

(c) Government have no proof that the creation of such a class is necessary. If the object is to secure shorter hours for the adult workers, it might involve less interference if a direct legal limitation of hours were imposed. This course would involve less interference and cause less trouble to all concerned.

(d) If it is considered inadvisable to create a class of "young persons," do you think it desirable that a special register of all workers under the age of 16 should be maintained in order to facilitate inquiries as to the physical fitness of the youngest adults to work full-time?

(d) *Vide* answer to question (c).

(e) Should the employment of women at night be prohibited?

(e) Yes.

(B) *Children.*

(f) Should the minimum age at which children are allowed to work in factories be raised beyond nine?

(f) The minimum age at which children are allowed to work in factories should be raised if any adequate evidence is forthcoming that employment at the earlier age leads to physical suffering or deterioration, and if discrimination between these ages is practicable.

(g) should certificates of both age and physical fitness be required before children are allowed to work in factories?

(g) Certificates of both age and physical fitness should be required before children are allowed to work in factories.

(h) Similarly, before children who have hitherto worked half-time are allowed to work full-time as adults, should certificates of both age and physical fitness to work full-time be required?

(h) Yes, if a class of young persons is not introduced.

(i) Should it be prescribed by law that children shall not be employed except in regular sets, whether morning and afternoon sets or double sets?

(i) If the present system can be shown to lead to evil results.

(j) Should factory owners be obliged to provide elementary education at their own expense for children working in their factories?

(j) This Government see no adequate reason for imposing this obligation on factory owners.

(k) Should a rule be made prohibiting non-working young children from accompanying workers to dangerous or unhealthy parts of factories? If so, how should such a prohibition be enforced?

(k) Government are not aware of any facts that suggest the necessity for such a regulation.

(C) *Ventilation, Sanitation, &c.*

(l) Should an attempt be made by testing samples of air taken from factories in India to prescribe an analytical standard of purity for air, in factories, with a view to secure proper ventilation?

(l) This would certainly be desirable.

(m) Should a similar attempt be made to prescribe a standard of moisture for the air in factories, with reference both to manufacturing processes and to the health of the workers?

(m) Yes.

(n) Should a standard of purity be fixed for the water used for humidifying purposes?

(n) Yes, provided due regard is had to the requirements of the manufacturing process concerned.

(o) Should the standard of latrine accommodation be raised to one seat for every 25 workers, and should the provision of separate urinal accommodation be insisted on?

(o) This is a point that should be decided on the evidence tendered to the committee regarding the deficiencies of the present accommodation.

(p) Should it be prescribed that all doors of working rooms shall be hung so as to open readily from the inside outwards in case of fire?

(p) Proper precautions against the outbreak of fire should be enforced.

(q) Are further precautions for fencing machinery necessary in any factories or class of factories.

(q) This Government prefer to await the report of the Commission before giving an opinion on this point.

(*r*) Should arrangements be made to secure uniformity in the administration of the Factory Act throughout India?	(*r*) The Act should be uniform. The rules and inspection arrangements should be adaptable to local requirements, and should, therefore, be entirely under the control of the Local Government. In the opinion of this Government a centralized department under the Government of India is not required, and, if instituted, would give rise to friction and inefficiency by tending to ignore local requirements and conditions, and to weaken the control of the Local Government, and to destroy responsibility where alone it can rest in actual practice.	Government of Bombay.
(*s*) Should full-time Medical Inspectors of Factories be appointed to assist the present Inspectors in securing the due observance of the Act?	(*s*) The large number of factories in Bombay and Ahmedabad appears to justify the employment of a whole-time Medical Inspector in these centres. (See answer to question No. 5.) Elsewhere than in Bombay and Ahmedabad the present system of medical inspections seems the best that can be devised in the circumstances.	

Witness No. 28.

Dr. J. A. Turner, M.B., D. P. H., Executive Health Officer, Bombay.

Dr. Turner. *Written evidence.*

I am acquainted with most kinds of factory operatives. I can supply certain statistics dealing with the mortality of the operatives in Bombay. I have formed an opinion on the subject; but the question has not, except during the past six years, been seriously studied. The sickness index is the only reliable guide, and this is not readily available in India, but I think it is very important and should be made available. The factory population is not below the general average of the same class as regards physique. But it is difficult to compare them with others. I consider the mill-hands of Bombay a fairly well developed class, and although not of great stature or measurement, they are to all appearances well to do. There are some of the same class working in foundries and as mechanics, and these are of a better physique. With the exception of phthisis, I do not think they suffer any more than the general population of the same class from any specific classes of diseases, and I can supply certain statistics regarding this matter. See Appendix G. of the Textile Factory Labour Committee's Report. Further figures for 1906 are attached. Six years however is hardly sufficient, and the statistics given before 1901 are not reliable. In the event of definite limiting ages being prescribed as regards certain classes of factory workers, certificates of birth or vaccination, or the statement of the mother or father before a Justice of the Peace, in addition to appearance, physique and signs of puberty, etc., would, in my opinion, be the most suitable methods of general applicability for the determination of the age of any particular examinee. I do not think the dentition test can be relied upon. I am of opinion that the existing law as to the employment of children in factories is evaded, judging from my experience during the examination of children in the Textile Factory Labour Committee. I am in favour of whole-time medical inspectors. They should be whole-time fully qualified medical men with a special training in public health and hygiene, and practical sanitation, and with experience of large cities and factories and labour. They should not necessarily belong to any service, but should be able to remain especially for factory work. They should not be allowed private practice. There should be a Chief or Inspector-General of Factories at Rs. 2,000 to Rs. 3,000 for each Presidency or Province. They should be the chief advisers to their respective Governments in matters relating to factories, and the labour in factories. Under them should be a staff of medical inspectors on Rs. 600 to Rs. 1,000 *per mensem* and a staff of factory inspectors to inspect the machinery and the technical details of each particular industry placed in each large city or district. The head-quarters of the Chief Medical Inspector or Inspector-General of Factories should be with the Local Government, and he should practically be the adviser to Government on factories and labour. I consider one seat for 25 persons to be a suitable latrine accommodation. I do not consider it advisable at present that the minimum age of half-timers should be raised, because there being no provision for free education these children are better employed in light work in mills rather than heavy work in the streets, or in idling in the *bazar*, and the wages they earn help to give them better food. I consider that the work of "doffers" is at times very strenuous and exhausting to young children. They have to move about quickly amongst the machinery carrying bobbins. On their dexterity and exertions depends the output of the spindles, which means that the men in charge of the spindles insist on the children working hard, and although they may rest a few minutes, and only work by shifts, I think for their age and physique they have to work hard, and would suggest that only boys should be employed in this particular work, and that they should be over 10. The working hours of adult males should be limited. I cannot say whether the physique of workers has been effected by long hours. There is no reliable evidence on this subject. It would be advisable to prescribe that, except when working by shifts, the legal working hours should be from 5-30 A.M. to 6 P.M. or from 6 A.M. to 6-30 P.M. The engine should be stopped for half an hour between noon and 2 P.M. In factories working on the day shift system the legal working hours should be from 5 a.m. to 8 P.M., provided that no adult male should work for more than 12 out of every 24 hours. I do not think it advisable to create a class of workers known as "young persons." It is desirable that a special register of all workers under the age of 16 should be maintained in order to facilitate inquiries as to the physical fitness of the youngest adults to work full time. The employment of

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women at night should be prohibited. It is not necessary at present to raise beyond nine the minimum age at which children are allowed to work in factories. I, however, have made another note on this point. Certificates of both age and physical fitness should be required before children are allowed to work in factories. Similarly, before children who have hitherto worked half-time are allowed to work full time as adults, certificates of both age and physical fitness to work full time should be required. It should be prescribed by law that children shall not be employed except in regular sets, whether morning and afternoon sets or double sets. It is desirable that factory owners should provide elementary education and recreation at their own expense for children working in their factories, during the time they are of work. A rule should be made prohibiting non-working young children from accompanying workers to dangerous or unhealthy parts of factories. This could be easily arranged by the management. An attempt should be made by testing samples of air taken from factories in India to prescribe an analytical standard of purity for air, in factories, with a view to secure proper ventilation. It is also advisable to provide means for getting rid of dust and fluff from factories as well. A similar attempt should be made to prescribe a standard of moisture for the air in factories, with reference both to manufacturing processes and to the health of the workers. A standard of purity should be fixed for the water used for humidifying purposes The standard of latrine accommodation should be raised to one seat for every 25 workers, and the provision of separate urinal accommodation should be insisted on. It should be prescribed that all doors of working rooms shall be hung so as to open readily from the inside outwards in case of fire. Further precautions for fencing machinery are necessary. Arrangements should be made to secure uniformity in the administration of the Factory Act throughout India. Full time Medical Inspectors of Factories should be appointed to assist the present Inspectors in securing the due observance of the Act.

Statement showing the total mortality, and the mortality from phthisis and other respiratory diseases, amongst the general and factory labourers in Bombay.

GENERAL LABOURERS.

	Population Without dependents.
1. Labourers, earth-workers, etc.	1,093
2. Port Trust general labourers	194
3. Tramway general labourers	110
4. Other labourers, dock, etc.	98,519
5. Domestic servants, *bhishties*, etc.	59,793
6. Servants, including *halal khors*, etc.	6,419
7. Municipal *begaris*	5,724
	171,852

Total ... { *Population* (1906) { Without dependents 171,852
{ With dependents 265,568

Year.	Phthisis.			Other respiratory diseases.			Deaths from all causes.		
	Number of deaths from phthisis.	Rate *per* 1,000 of population, without dependents.	Rate *per* 1,000 of population, with dependents.	Number of deaths from other respiratory diseases.	Rate *per* 1,000 of population, without dependents.	Rate *per* 1,000 of population, with dependents.	Number of deaths from all causes.	Rate *per* 1,000 of population, without dependents.	Rate *per* 1,000 of population, with dependents.
1900 ...	1,001	5 82	3 76	1,587	9 23	5 97	12,094	70 37	45 54
1901 ...	1,124	6·54	42 3	845	4·91	3·17	10,645	61·94	40·08
1902 ...	607	3 53	2 28	670	3 89	2·52	7,249	42·18	27·29
1903 ...	343	1·99	1·29	521	3 03	1 96	6,797	39·55	29·35
1904 ...	310	1 80	1·16	858	4 99	3·23	6,078	35·36	22 88
1905 ...	432	2 51	1·25	841	4·89	3·16	7,269	42·29	27·37
1906 ...	486	2·81	1·83	1,347	7·83	5·07	7,587	44·14	28·56

FACTORY LABOURERS.

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	Population without dependents.
1. Metal workers and tool makers	82
2. Workshop hands	7,585
3. Weavers, spinners, etc.	112,027
4. Printers, etc.	424
5. Other labourers, printing presses	2,486
	122,524

{Population (1906) { Without dependents 122,524
{ With dependents 190,417

Year.	Phthisis.			Other respiratory Diseases.			Deaths from all causes.		
	Number of deaths from phthisis.	Rate *per* 1,000 of population, without dependents	Rate *per* 1,000 of population, with dependents	Number of deaths from other respiratory diseases.	Rate *per* 1,000 of population, without dependents.	Rate *per* 1,000 of population, with dependents.	Number of deaths from all cases.	Rate *per* 1,000 of population, without dependents	Rate *per* 1,000 of population, with dependents.
1900 ...	641	5·22	3 66	643	5·23	3 37	5,199	42·44	27·33
1901 ...	613	5 00	3 21	364	2 97	1·91	4,427	36·13	23·24
1902 ...	308	2 51	1 61	207	1 68	1·08	2,686	21 91	14·15
1903 ...	270	2 23	1·41	180	1·46	·94	3,057	24·95	16·05
1904 ...	358	2·92	1 88	329	2·68	1·72	2,347	19 16	12 22
1905 ...	401	3·27	2·10	201	1 62	1 05	3,172	25·88	16·65
1906 ...	534	4 35	2 80	591	4 82	3 10	3,718	30 34	19 52

Oral evidence.

Witness stated that he had been nearly 7 years in Bombay, and in the course of his duties he saw a good deal of the mill-hands. In the statement appended to his written evidence "general labourers" represented certain special kinds of labourers according to the census returns of occupations, these occupations being those with whom they could best compare the mill operative. According to the statement the mortality among factory labourers was much smaller than that of the general labourer. Witness agreed that from those figures the mill operatives appeared to be the healthier lot. It was his opinion that, with the exception of phthisis, mill operatives were much less liable to respiratory diseases than general labourers. A possible explanation of the low mortality among mill-hands was that large numbers might on falling ill return to their country, where they spent their remaining days; but, on the other hand, it was possible that being confined in a mill for 12 hours during the day prevented the operative from falling a victim to other diseases. As a class they were given to phthisis, but were less liable to other respiratory diseases. It would be safe to assume that people working in a mill were rather more predisposed to phthisis than outside labourers, and also predisposed to bronchitis, but according to the statistics this latter assumption was not borne out. The statistics of mortality were compiled from medical certificates, from information obtained at the cemetery, and from information collected by the municipal registrars. Where there was no medical certificate he did not think the information reliable. There could be no mistake about the total death-rates in the statistics given in witness' written evidence. Caste and occupation were always stated in the death returns. Witness had not noticed that there was a great absence of elderly men in the mills, but agreed that when they attained a certain age they retired to their country. The statistics already referred to showed that mill operatives were up to the standard of other classes of labour; and if anything were a superior lot. It was his opinion that the conditions of mill labour were such that long hours of work must have an injurious effect upon health, and considering those conditions he agreed with the 12 hours' day. Witness did not think that there had been a tendency for the mortality of mill-hands to increase year by year. Operatives were in the habit of going to Ratnagiri and other places down the coast at stated intervals, and these changes would prove beneficial to their health. He had not observed any deterioration in the health of the mill-hand. The only safe index on this point would be the sickness index, which unfortunately at present was not available, and which ought to be available. The only persons who could give the requisite information were the doctors who were employed in the mills, and possibly they kept no returns. Mill-hands were not housed worse than the ordinary labourer. If there were several cases of phthisis in a mill, it was possible that the atmosphere and general conditions might help to spread the disease. Mill operatives might, however, not be exposed to those sicknesses which affected people working out-of-doors. Witness did not agree that the mill population was a floating one. In his opinion a large city drew such people, who, in course of time, settled down to urban life.

It was quite possible that the men did not actually work very long hours, for they loitered about and took frequent holidays. It was not his experience that there was a large amount of

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drunkenness among mill-hands. A phthisis patient worked in the mill as long as he could, and did not necessarily retire to his country to die. Death might occur in the hospital in Bombay, and if the patient had been out of work for some time then the return would probably be "no occupation." This was a possible explanation of the low mortality returns for mill operatives. There was no large single class of labourers with whom they could compare the mill operative. Witness considered that many children were passed as 9 and 14 years when they were really below those ages. If the present Act in regard to children were strictly administered, then, generally speaking, there was no necessity for any alteration, except that witness entertained a strong opinion concerning the work which the young children were sometimes put to do. The minimum age for girls should be raised to 10, and if the certifying surgeons were more careful the boys' age might be left at 9. The benefit of the doubt should not be given to the child of 9, but he agreed that light work in the mill was better than loitering about. Children should also be prohibited from being in the mill except during their actual hours of labour. The dentition test was not strictly accurate. He agreed that the doctor might combine the duties of medical inspector with those of Factory Inspector. The doctor would require a little technical knowledge, but this could be easily obtained. Latrine accommodation should be 1 in 25. It was true that the men loitered about, but their excuse was that they had to wait. If the accommodation were increased then the excuse would disappear. Apart from that the present accommodation was not enough. In the Bombay *chawls* they had decided upon 1 in 20. Very few mills provided urinals, and should these become general then 1 in 50 for latrines would still be insufficient. The standard of 1 in 25 should be worked up to. Witness had not tested samples of air in mills. If the windows of mills were kept open, he did not think that the ventilation was bad. Speaking generally, in the early morning it was too cold to have them open, and so some artificial system of ventilation was necessary. As regards a long interval in the middle of the day in the hot weather, if sunrise to sunset hours were fixed, witness thought that the operatives in Bombay would prefer the extra hour at night. He went through the mills at night in 1905, and did not consider that the men were doing as good work as during the day. It was impossible to expect a man to work such hours and maintain a reasonable standard of efficiency. Half-timers did not work late as a rule, and they should stop at 6-30 P. M. Witness agreed with keeping a register of all boys up to 16 years. It would enable the inspector to keep a close watch on the young adults. If a boy tried to evade the law and went to another mill to escape inspection, his name would have to be entered in the new mill. He did not anticipate this arising, and in any event they could not legislate for everything a man liked to do. In his opinion the register would make it impossible for the unfit child to escape inspection. This did not mean creating a "young persons" class, as the hours would not be limited. The inspecting officer could call for the register and either muster the whole lot or call for half a dozen. The method of inspection must be left to the officer. No arrangements had been made in Bombay for open air recreations for mill-hands.

Witness No. 29.

Lieut.-Colonel Corkery.

Lieutenant-Colonel Corkery, I. M. S., Presidency Surgeon, 3rd District, Bombay.

Written evidence.

I am chiefly acquainted with operatives employed in cotton and weaving mills. I can supply no statistics, but from my experience of over 26 years' service—of which 19 have been in civil employ—I consider the general health of mill operatives compares favourably with that of the non-factory population of the same class. I have noticed that lung complaints —especially tubercular affections—are not more common amongst mill hands than among the ordinary labourers. I consider the factory population possesses quite as good physique as the general average of the same class employed elsewhere, and that they do not suffer from any specified class of diseases any more than the ordinary class. In the event of any definite limits of work being prescribed, I would suggest that adults be employed for 12½ to 13 hours a day, females 11, young persons 9, and those between 9 and 14 years, 7 hours—those under 9 not to be entertained. The dentition test is not reliable, especially in India, as frequently native children have the full complement of permanent teeth at the age of 12, while others who appear 14 from every other point of view have only 24 or 26 permanent teeth. As a general rule, those with 24 teeth are 9 years to 12, while those with 28 are from 13 to 16 years. It is only by taking all the facts into consideration—number of teeth—height—and particularly general physique—and genital development—that a fairly accurate estimate of age can be made, and this, too, with experience and knowledge of the natives. I have had only a limited experience as a medical inspector, but during the past 6 months I have been certifying surgeon of the 3rd District in which there are about 60 mills, and have heard of occasional cases, where the employment of children in factories has been evaded—three having occurred during my time. But since the introduction of the new rules, which tend to prevent any deception, only one case occurred, the culprit being detected by his height and marks of identification as he tried to personate another lad, much younger and shorter than himself. I am not in favour of a whole-time medical inspector. I consider the present arrangements are quite adequate, and any change would lead to no improvement, as a medical inspector—to be of any use—must pay surprise visits, and this the Civil Surgeon of the station can always do, whereas a full-timed medical officer's movements would be heralded long before he reached the mill, and the owners would have ample warning to cause the disappearance of any irregularity and conceal children under 9, if employed, and thus the object of the inspection would be frustrated. If Government insists on a full-time officer, he should be a senior and experienced officer of the Indian Medical Service, debarred from private practice, and should receive Rs. 2,000 *per mensem plus* grade pay. This, together with travelling allowances, would far exceed the cost of the present régime. I consider the provision of one latrine seat for every 25 workers advisable, as otherwise the latrines become most objectionable from the amount of excreta, especially as latrines are not cleaned more than twice a day. Several of the workers resort to adjoining fields, owing to the seats being occupied at the time by other men.

The working hours of adult males should be limited. The physique of workers has not, to my knowledge, been affected by long hours. The hours for work during the hot or summer months should be limited from 5·30 A. M. to 6 P. M., during the rest of the year from 6 A. M. to 6 30 P. M. The engine should be stopped for half an hour between noon and 2 P.M. I do not recommend the shift system except for half-timers. I have had no personal experience and cannot definitely say whether there has been any physical deterioration, as the result of illegal employment as adults of persons between the ages of twelve and fourteen. I consider it advisable to create a special class of "young persons" for those between 14 and 16, who should work not more than 9 hours a day. Those over 16 should be classed as adults. The employment of women at night should certainly be prohibited. I do not consider the minimum age at which children are allowed to work should be raised beyond nine. Certificates of both age and physical fitness are certainly advisable before children are allowed to work in factories. Similarly, certificates of both age and physical fitness, should be required before children, who have hitherto worked half-time, are allowed to work full time as adults. It should be prescribed by law that children shall not be employed, except in regular sets, so that the exact hours for their work and recess can be known, and notices of the same should be printed and posted up in every mill. I do not consider elementary education essential for factory children, and would recommend their spare time being utilised in physical drill or gymnastics, and their being allowed full scope to play in the open. A rule should be made prohibiting non-working children from accompanying workers (except infants in arms) to dangerous or unhealthy parts of factories. A fine of 2 annas a head to be imposed for every infringement of this rule. A separate room amongst the out-houses could be set apart and a matron or some female placed in charge of such children (whilst their mothers are employed). This system is adopted with much success in famine camps, of which I have had considerable experience.

Lieut.-Colonel Corkery.

Witness stated that he had been for six months in Bombay, and had previous experience of factories at Dharwar and Ahmednagar. He agreed with the proposal to restrict hours, but did not think that the operatives as a class had fallen off in physique. Personally, he saw no ill-effects. Many boys of 14 years of age were not up to a full day's work, but the certifying surgeon had to pass them because they were of the prescribed age. In determining ages he considered development, height and teeth; he knew of no definite standard that could be fixed in this matter. There was a form of tubercular complaint among the young adults, but the proportion was not greater than among the non-factory hands. Both the child and the young adult should obtain a certificate of fitness as well as of age. When examining boys he made them strip. No children should be allowed to accompany their mothers into the mill. This made inspection more difficult. If necessary, he would have a room set apart for babies. Witness entered the distinguishing marks himself in form I. These are copied on the other register—with their foils—and are sent to witness for signature and any necessary correction. He agreed that the certifying surgeon should be asked to undertake that duty. On an average the examination of every child occupied five minutes. In his opinion a full-time medical officer would be unable to pay surprise visits, and the Civil Surgeon was quite able to make the necessary sanitary inspections. He rejected perhaps 5 *per cent.* of the children sent for examination as under nine, and about one-eighth of those who came up to pass as adults. Many boys who could not pass the test went away to other mills. One in 50 latrine accommodation was not sufficient, and the present insanitary condition of many of the latrines might be attributed in some degree to the over-crowding. In his district attention was paid to the complaints on such matters. At present he did not inspect mills; he only certified. He did not agree with the thumb mark from a practical point of view, but it might have some moral effect. Witness did not complain about the smallness of the certifying fee. He could say nothing definite about the health and physique of the Bombay operatives. On the whole the children were strong; they came from the Konkan. In his opinion the mill population was healthier than the jail population. He did not altogether agree with the weight test, but would rather consider the general physique, taking into consideration the race to which the men belonged. He was in favour of restricting the hours on moral rather than on physical grounds. Witness agreed that the operatives could not work the long hours of 1905 regularly without injury to health.

Oral evidence.

Witness No. 30.

Captain E. F. Gordon Tucker, I.M.S., Bombay.

The chief points in the general list of questions supplied, likely to be of interest to medical witnesses, concern the suggested limitation of the hours of labour for adults, and the possibility of prohibiting child-labour in factories altogether. My own view is that the maximum hours for adult males should be 12 hours, for adult females 10 hours, and that the employment of children between the ages of 9 and 12 should be prohibited altogether. Also that the hours for children between the ages of 13 and 16 should be 5 only. Any one holding such views would base his opinions on a knowledge of our climatic conditions, of the exact nature of mill labour, and of the physique and general health of the operative class in this city. The question "what is the main reason for the general low health of the poorer classes in this city," is a difficult one to answer precisely, as this condition is the product of many unfortunate influences which obtain here; of these, over-crowding, poverty, high price of food-stuffs, neglect of most of the rules of personal hygiene, are the most important. We may add to these, the effects of the ever-present malarial fevers, which are said to be on the increase in Bombay, and which undoubtedly produce a large amount of unhealthiness among the people in the poorer quarters of the city. An opinion might be added that another most important factor was the excessive hours worked by the thousands of mill-hands, but a satisfactory proof of this statement based on statistics would be almost impossible. We are met at the outset by the difficulty that we cannot produce statistics showing the relative health of these operatives as compared with

Captain Gordon Tucker. *Written evidence.*

Captain Gordon Tucker.

the general average of the non-factory population of the same class. It is most unfortunate that there has been no attempt during the last few decades to preserve the records of disease in our large Bombay hospitals. The records of the J. J. Hospital would have been invaluable in this inquiry, inasmuch as a hospital to which a large medical school is attached would be expected to have ample notes of all the in-patients, properly bound and indexed, and available for reference. We could have looked up for the Commission the records of all cases of phthisis and tubercular disease, and have arrived at some conclusion as to how much greater the incidence of tuberculosis was on the factory class than on others. Unfortunately an order has been in force directing the destruction of hospital records every three years; consequently we have records available for six years only at this important medical centre; and these at present are being sorted and bound. We cannot therefore give the Commission anything more than a general impression derived from the observation of a great mass of clinical material among the in and out-patients, and this must be taken for what it is worth. I may say therefore that I have no doubt that the physique and health of the operatives in the mills is lower than that of the non-factory population. Phthisis is very common among them.

The dentition test is a rough guide to the age, but is more accurate after the twelfth year. If all the teeth of the permanent set have erupted, the child must be at least twelve. But the height and weight should also be taken into account. At present the weight is not taken and registered as it should be. Tables of the normal weight and height of healthy Indian children at different ages should be prepared; and those below a reasonable average should be rejected. I know of no table for the weights and heights for Indian children. There is a table for English children in Lyon's Medical Jurisprudence. I know nothing of the alleged evasion of the law concerning child-labour in factories. There should be a whole-time Inspector-General of Factories, assisted by a staff of qualified natives of India. They should supervise the health of the operatives and remove all cases of pulmonary tuberculosis from work within the factories. The children should be weighed periodically, and their weights recorded on their papers. The Inspector-General should be an officer of the Indian Medical Service, and should report to Government annually through the Surgeon-General with the Local Government. He should not be permitted to take private practice, and his salary should be Rs. 2,500 a month. The present method of admitting children into the factories is most unsatisfactory. Twenty or thirty children are lined up before the medical inspector, who has generally a lot of other work to do, and they are sized and aged by their teeth, and three certificates made out for each child. No examination can possibly be made of the condition of the child's organs or of his general fitness for prolonged work in a mill. If their "age" is satisfactory, they are sent off, and how they will be influenced by their environment is not ascertained. From my own observations on mill children in Surat, Gadag and Hubli, I should characterise the majority of them as stunted, small limbed, anæmic and timid. For the medical inspection of the children described above each candidate brings up a sum of four annas which is the doctor's "fee." Should the inspector consider that the child is unfit for mill labour, whether on account of his health, physique or age, the child keeps his four annas, that is to say, the doctor is fined for doing his work efficiently.

Oral evidence.

Witness stated that he had had medical factory inspection work in the *mofussil*, but not in Bombay. A large number of factory operatives came to the J. J. Hospital, especially to the out-patient room, and the result of his observations was the opinion that, generally speaking, the physique of the mill-hands was lower than that of labourers in outside employments. The J. J. Hospital was situated in the mill district. Witness was afraid that they would not be able to get any reliable scientific statistics from Bombay hospitals. The records of the J. J. Hospital were at present being sorted and bound, and when this was finished they might yield some useful information. The occupation of the patient was always stated, and if he had worked in a mill he was described as a mill-hand. Tables might be worked out and an approximate percentage arrived at. For instance, they could ascertain the number of mill patients in a thousand cases of tuberculosis. Statistics were available covering the last six years. Only 40 *per cent.* of the mortality of Bombay was certified by medical men. Much of the remainder was attributed to "fever," which no doubt included cases of tuberculosis. Witness had examined mill adults and children, and speaking broadly the ordinary case of tuberculosis seen in hospital would be a mill hand, while the ordinary case of malaria would be a coolie. Contrasting the physique of these two classes, the mill-hand came out badly. From the hospital patients witness had actually examined he could say that the majority of those who came up with phthisis were mill operatives. Tubercular disease was prevalent down the west coast of India, and they saw a great deal of it in Bombay. Witness did not see much tuberculosis of joints, as this was a surgical condition, and he could not say that it was general among children. Witness would not say that the majority of patients treated at the J. J. Hospital were mill-hands. The hospital could only accommodate the more serious cases, and often a man did not come in until he had been ill for three months. That meant that he had been out of work for three months, and when asked for his occupation he would reply "*none.*" Frequently, if the doctor asked what was his last occupation the reply would be that of a mill operative. In the age test witness relied on the teeth and general development. He did not see why they should not have tables for Indian children like those for English children. A good guide could be obtained by taking a large number of children in a well run mission. The age of the children there would be very near the correct age, and if their height and weight were taken there would be some basis to work upon. The inspection of children was at present hurriedly performed. If he had had the power to reject children of nine as unfit he should have availed himself of this power in a certain number of cases on account of bad physique, anæmia, small limbs and insufficient muscular development. He should also have rejected some children of 14 as unfit to do a full day's work.

Witness No. 31.

Mr. L. W. Hartley, formerly Presidency Inspector of Factories, Bombay, and Special Inspector for the Central Provinces.

Mr. Hartley. Written evidence.

The information given below is based upon knowledge gained in India since my arrival in 1889. For the first six years, 1890—1896, as an up-country agent of Messrs. Gaddam and Company, I had a cotton press factory under my immediate control, and I had occasion to visit the surrounding cotton ginning factories daily during the cotton season. From 1896—1900 I was engaged at the head office of Messrs. Gaddam and Company in Bombay. From 1900—1906 I held the post of Presidency Inspector, having in all 68 perennial and 325 seasonal factories Of these 28 were spinning and weaving mills and 393 were cotton presses and ginning factories. The working hours of adult males engaged in mills should be limited to 12½ hours *per* day, excluding the midday rest. The engine should be stopped for the half hour rest at midday, and it is very important that this interval of rest should be at a fixed time, and also that the workers should be obliged to leave their work room. It is impossible to produce satisfactory evidence in support of an opinion that the physique of the workers has been adversely affected. Mill hands leave their employment when sick and go to their homes in the country. What happens afterwards is not accurately known, but it is significant that one sees very few old men working in mills. As the result of employment in mills, there are children between the ages of 12 and 14 years who have physically deteriorated, and if it is considered inadvisable to create a class of "young persons" a special register should be kept of all workers under the age of 16. The employment of women in spinning and weaving mills should be prohibited after 6 P M. Certificates of both age and physical fitness should be required before children are allowed to work in factories. Before children (about 14 years of age) who may or may not have hitherto worked as half-timers are allowed to work full-time as adults, they should obtain certificates of both age and physical fitness to work as such. Schools should not be held within the main walls of a mill building, as they are so very frequently used to cloak contraventions of the Act. Non-working young children should not be allowed to accompany workers to dangerous or unhealthy parts of factories. It is allowable in some mills for mothers to sling the babies under the reeling machines. In many mills babies or young children are not allowed inside where work is carried on, but they are allowed in the compound. An attempt should be made to secure proper ventilation. That there are mills which have their spinning rooms and weaving sheds properly ventilated shows that the difficulties are not insurmountable. Improved ventilation would be a greater boon to the workers than a restriction of working hours. The standard of latrine accommodation should be raised to one seat for every 25 workers, and the provision of separate urinal accommodation should be insisted upon. Full-time medical inspectors of factories should be appointed. All ginning and pressing factories should be brought under the Factory Act, irrespective of the number of months they work or the number of workers they employ. I consider this necessary in order to secure the workers from the dangers of unguarded machinery and the risks of injury by fire. A small ginning factory working for a short period is generally a more dangerous place to work in than a large and more regularly employed factory. Women should not be prohibited from working in ginning factories at night time. The Factory Act should have a special provision exempting male and female adults working in presses and ginning factories from any restrictions as to their hours of work and intervals of rest, and it should be provided that no child under the age of 14 should be employed inside the building of a press or ginning factory. The line shaft and second motion pulleys of ginning factories were not provided with any guards or fence rails until orders for their provision were passed by me. In many instances the guards are satisfactory and are well maintained, but there are many instances where the instructions have been disregarded or the factories have failed to keep the guards in position and repair. Owing to the shafting not being cased in between the drums, I have known of several fatal accidents and have seen men seriously injured. Women should be prohibited from working inside a press factory in the same room where a opener is at work. Nothing can be done to prevent stones from being hurled out of the opener or fires occurring there. I know of one Insurance Company which was interested in 68 fires which occurred (during the last year) inside pressing factories, and in 57 of these the outbreak was attributed to friction in the opener machine. During a period of 5 years and 10 months I know of three fires having occurred in press factories resulting in the death of thirty women and two men, besides a number of injured. I consider the question of prohibiting the employment of women inside a press factory where a cotton opener is at work as being most important.

Oral evidence.

Witness stated that he held the post of Presidency Inspector for 6 years. He visited the mills up-country, in the Central Provinces and Sind, and he had also spent 3 months in Ahmedabad. He approved of a twelve and a half hours' working day for cotton mills. He once received a very serious complaint from Poona, where a cotton mill worked from daylight until 9 o'clock at night. On one of his visits there the men approached him with a view to a restriction of their hours. Witness spoke to the manager, who said that the men could not strike because the master held a certain amount of their wages in hand. In other parts of the Presidency the mills worked from daylight to dusk. He had also inspected gins and presses. Formerly he was manager of a pressing factory, which during one very busy season worked continuously with three shifts night and day. In ginning it was arranged that there was a surplus of women for the gins working, and though excessive hours appeared to be worked, yet ginning labour was not on the same footing as that in mills. A woman could leave her work whenever necessary, and substitutes were provided to enable her to do so. The long hours were not continuous, and he did not think that any woman in a ginning factory worked 12 hours, if as much. In some of the Khandesh gins they worked up to 12 o'clock at night occasionally, when prices were high or the crop large. The hands were paid by the week, and so if the work did not agree with them, they could leave. The long hours in ginning factories appeared at first sight to be a serious abuse, but it was not really so when one knew the method of working. In gins and presses the labourers should be allowed to work without restriction, and he would only bring these

Mr. Hartley.

factories under the Act as regards the fencing of machinery, the provision of fire escapes, and in some places, of latrines. He would only compel ginning presses to have latrines where arrangements could be made to have them cleaned, or when there were residences near the press, or gin. The opener in a press house was used for mixing cotton. In a hundred bales of cotton there were sure to be one or two of inferior quality, and so the cotton was passed through the opener in order to obtain one uniform quality. The opener that sometimes was the cause of accidents was the machine used in presses; the opener in a ginning factory was of a different kind. It was seldom used, but also required guards. While the press house opener was in operation large quantities of cotton accumulated in front of the machine, and one man would rush up and clear this away while the machine was still working. Sometimes a stone would get in with the cotton, and would be thrown out with very great force. Witness knew of one man who was killed in this way. They could not prevent stones from getting in, as they got mixed up with the cotton when it was gathered off the ground. Another danger was that of fire. The immense friction, or the presence of stones or matches, produced sparks, which often caused the fluff and loose cotton to ignite, and the flames spread with terrible rapidity. The danger of catching fire from this cause applied more to women than to men. Inferior cotton might be purchased, and in order to hide its defects it had to be more carefully mixed with better quality cotton in the opener. In some factories two rows of women were employed for this purpose, and they worked right in front of the opener. The nuisance and inconvenience caused by the loose fluff was such that they frequently covered up their faces with their *sarees* and sat there blindfolded. A spark would come out, their dresses would be ignited, and they had no chance of escape. There had been several serious accidents of this character. On one occasion six women were burnt to death, and at Barsi in 1903 a fire in the press house resulted in the death of 12 women and of one man who went to their rescue. The danger to the women lay in their style of dress, and in the fact that they blindfolded themselves, with the result that although there were plenty of exits they could not reach them. It was absolutely unnecessary for them to work in front of the opener, and it was only allowed when ignorant men were in charge of the factory, who utterly neglect all precautions for the safety of their work-people. The cotton could be cleared away by men, who only wore a small loin cloth, and the danger was then reduced to a minimum. Last year one insurance society was interested in 68 fires in press houses, and 57 of these were caused through friction in the openers. It was dangerous to have the opener in the press house. Whenever they had it, it would necessarily endanger that apartment, and so he thought it should be placed in a separate building. A simpler method was to prohibit women from working in a room where an opener was in operation. It was his opinion that in accidents of that nature 6 out of 12 women would always lose their lives. There were openers in all the Khandesh presses. All the shafting in ginning factories should be protected. In the Khandesh gins the shaft was underneath the gin house floor. Small pieces of cotton found their way there, and he knew that women were sometimes sent in to clear the cotton out. He knew of one case where a woman was caught in the shafting and killed. Usually it was the men's *dhoties* that were caught. He would have all the shafting cased in by semi-circular pieces of sheet iron. This could be easily done. On all upper-storey presses there should be an outside platform at the top of the steps. In Khandesh they had such platforms, and they were useful in that when a fire occurred, and there was a rush for the steps, the people did not fall over. The steps could be made of either wood or iron, but the great thing was to have them broad enough. In spinning and weaving mills he thought there were not sufficient ladders or enclosed stairways from the upper storeys. All children under 14 should be prohibited from working in gins. In Khandesh, Berar and the Central Provinces children were not employed, but elsewhere they worked in gins, and their lungs were effected by the dust, etc. It was not usually economical to employ children, but on the Broach side a great many children were employed. He had found that a school in a mill was usually abused, and he would prohibit schools inside the building, if not inside the compound. In one mill at Surat he examined the children at school one day, and the next day, when he paid a surpise visit, he found them all working in the mill. In the mill on one occasion he called all the children of one shift, and found that they could not be got into the room which was called the school room. The school should be outside the mill premises; and he did not think that the children would go to other mills if they were allowed to leave their own mill compound. He did not object to a school inside the compound, so long as it was not inside the main building. He would give the inspector of factories power to examine the school register. He did not think that children went from one mill to another in the course of one day. If they had the time off they would rather play about. There was a greater danger of their being made to do overtime in their own mill by the jobbers. The elderly mill-hands became worn out, and went to their country. He only once saw a man in the mill who had white hair. He did not consider that mill operatives as a class were provident. In regard to the midday interval, all mills should be compelled to give notice of the particular half-hour for which they were closing. At present the inspector could not tell whether they closed or not. His experience of cotton mills was mostly up-country, and in the *mofussil* he did not think that the creation of the proposed "young persons" class would affect the working of the mills. A child of 14 should be obliged to get a certificate of physical fitness, and if he failed to do so, he should remain as a half-timer. If he passed, then he could work 12½ hours—the working day that he suggested for adults. Witness thought that more explicit instructions should be laid down in the Act as regards ventilation. Also a weekly holiday should be fixed. This need not necessarily be Sunday, but each mill should be allowed to choose its own day. It should notify the inspector in advance, and then keep that day for the whole year. The ginning factories in Khandesh were brought under the Act before witness became inspector.

Witness No. 32.

Mr. P. B. Haigh, I. C. S., Chief Inspector of Factories, Bombay.

Mr. Haigh. *Written evidence.*

I am not of opinion that under the conditions which at present govern the supply of labour the working hours of "*adult*" males should be limited. I take the term adult in this question to

mean a fully grown person, and not any male who has been certified as over 14 years of age. At present a considerable number of so called "adult" workers are mere children. I cannot offer an opinion as to whether the physique of workers has been affected by long hours. If hours are to be limited, I would suggest that, except when working by shifts, the legal hours should be 5-30 a. m. to 6-30 p m., with an interval of an hour from 12 noon to 1 p. m. during which time the engine should be stopped. The adoption of a fixed period for the stopping time would facilitate inspection, and would cause no hardship to millowners. I have frequently asked mill managers and engineers whether they would object to the substitution of a fixed period of stopping for the permissive period of half an hour between 12 and 2 p. m., and have invariably been told that they would have no objection. In factories working on the day shift system, the legal working hours might be from 5 a. m. to 8 p. m., provided that no adult male should work for more than 12 out of every 24 hours. I cannot speak from personal knowledge as to the physical deterioration of workers intermediate in age between the half-timer and the adult but if the hours of adult labour are to be unlimited, I certainly think that a special class corresponding to the 'young person' of the English Act should be created by law and the actual hours of work should be prescribed for them, so that their mere presence in a mill beyond the prescribed hours should be conclusive proof that they had worked overtime. If no class of 'young persons' is created, I do not think the maintenance of a special register of all workers under the age of 16 would be worth the trouble it would entail. I think the employment of women at night should be absolutely prohibited. I think that the age certificate for children might with advantage be abolished altogether, and a certificate of physical fitness to work (*a*) as a half timer or (*b*) as a full timer substituted. The physical standard usually attained by a healthy 10-year old child might be ascertained and adopted as a standard for (*a*), and that attained by a healthy 15-years old child as a standard for (*b*) I think it is hardly possible to insist that children shall not be employed as half timers or full timers until they have obtained a certificate that they have attained standard (*a*) or (*b*) respectively. The law might in that respect stand as it does at present, so that children might be employed at first without any certificate, subject to the penalty of a prosecution if the child were found to be below the standard required in each case: with this addition that no child shall be employed as a half timer for more than ten days without being provided with a certificate that he has attained standard (*a*), and that no child that has hitherto worked as a half timer shall be employed as a full timer without being provided with a certificate that he has attained standard (*b*) In order to ascertain whether this rule is complied with, inspectors should be empowered to search the pay and muster rolls of the mill. It should be prescribed by law that children should not be employed except in sets, and that any child found working in a set different from that in which it is enrolled shall be deemed to be working overtime Factory owners should be obliged to provide elementary education at their own expense for children working in their factories; but the hours of attendance at school should be limited to 3. At present large numbers of non-working children are to be found in every mill This is most undesirable. The children themselves run considerable risk: and the work of the factory inspector is greatly hampered, as whenever a small child under nine years of age is found, apparently working, the manager or jobber at once says that the child had merely accompanied its mother. It is however most difficult to suggest any means of enforcing this prohibition without causing hardship to the children's parents employed in the mill. Samples of air taken from factories should be regularly taken and tested. The work should be under the control of the testing officer—an expert chemist—who would direct the inspectors when and where and in what manner to collect the samples, besides taking samples himself Should special medical officers be appointed exclusively for the purpose of the Factory Act the work might be entrusted to them. Similar tests might be taken for moisture. I cannot offer an opinion as to the standard of purity to be fixed for water used for humidifying purposes. Latrine accommodation should be provided at the rate of one seat for every 30 workers and separate urinal accommodation should be insisted on. All doors of working rooms should be made to open readily from the inside outwards In case of fire an even more necessary precaution is the provision of fire escapes outside the factory building from the upper storeys to the ground, which should always be accessible. I am not aware that any further precautions for fencing machinery are required. I do not understand clearly what advantage is to be gained from uniformity in the administration of the Factory Act throughout India. The Local Government is best able to carry out the provisions of the Act with regard to local conditions. I believe that full time medical inspectors are absolutely necessary to ensure the proper working of the Act.

Mr. Haigh.

Witness stated that he had been in Bombay since June 1907 he had had no previous experience of factories. During the time that he had been able to make observations he had not noticed that mill operatives were inferior in physique, as compared with persons in outside employments. He frequently inspected factories in the afternoon. The majority of the mills closed about 8 o'clock, but one or two worked later. He had not heard the men complain of long hours. In his opinion there were many young adults who ought not to do a full day's work. At present they were working the full day. Witness advocated a 12-hour day from 5-30 a m. to 6-30 p. m., with an interval of one hour. He thought an hour interval was really required, and the men would work the better for it. The present half hour interval could be taken at any time between 12 and 2. This made evasion of the law easy, and he had been told that some mills only allowed 20 minutes. The interval should be fixed by law at a certain definite time. If the hours of adult labour were not restricted, then a class of "young persons" might be formed. Witness agreed that the long hours of 1905 from 5-30 A. M. to 8-30 P. M. were too long if continued for any length of time. The supply of labour was so much less now that it was not likely that the men would work at that extreme pressure for long. He believed that those long hours were only worked for a short period. In his opinion many children were passed as over fourteen when an ordinary observer would place them about twelve years of age. He had also seen children who did not appear to be nine years of age, but the discrepancy in this respect was not so marked as in the case of children passed as fourteen. He had had three prosecutions for working children as full timers when under fourteen years of age. He saw no

Oral evidence.

Mr. Haigh.

very great difficulty in compelling children to attend school. They came to the mills with their parents, and stayed on the premises during the interval between shifts. The parents would much prefer them to be under some supervision. Owners of small mills might object to the provision of education, but he did not think that the big mill-owners would object. He had made some experiments in testing the air in mill buildings, but they had not proved of any practical utility. The present latrine accommodation was not enough to prevent overcrowding. Some mills had the septic tank system, but the arrangements for cleaning latrines varied greatly. Witness thought there should be another full-time inspector in Bombay. Mr. Engel had excise duties as well as inspection work, and part of witness' time was also occupied in other duties. The new inspectors could be obtained in India. An additional inspector would meet the case in Bombay, provided they had a full-time medical inspector. Under the Cotton Duties Excise Act, witness had a certain amount of control over the factories in the Presidency, but not under the Factory Act. He also had control, to a certain extent, over the inspectors, but this was chiefly in regard to finance. There was a special officer in Sind. Each District Magistrate in his own district could sanction prosecutions. There was a scarcity of labour, and any operative could obtain work in any mill to which he cared to go. There was no combination among the men, and if they were anxious for shorter hours, he knew of no organisation through which they could make their demand felt. Labour was obtained through the jobbers, on whom the owners tried to throw the blame in case of any evasion of the law coming to light. Each mill should have some officer who would be responsible for any breach of the law. Witness promised to submit a statement to the Commission concerning certain defects in the present Factory Act. The certifying work was done at present in rather a perfunctory manner, simply because the surgeon had no time. The words "flat nose" on a certificate, by way of a personal identifying mark, were, for instance, of no help to the inspectors. The certifying work could be done by one full-time special officer, and another full-time medical officer could do all the inspecting. The certifying surgeon received a fee of four annas if he examined the child at his office, and a fee of Rs. 10 if he made the examination at the mill, in addition to the four annas fee *per* child. By working in mills children were debarred from all possibilities of education; consequently the mill-owners should provide schools. If the child had no parents, he would have some other relation, for they all worked in families. Concerning ventilation and humidity, witness advocated appointing a special officer to enquire into these matters. He would recommend no standard until there was sufficient information to go upon. They could not fix one standard for the whole of India. Witness could not say how many mills were connected with the city sewage system. He agreed that the septic tank system would be extremely beneficial if adopted generally, but it would be too costly for small factories. This system might be insisted upon for large factories if not connected with the city sewage system. He would prohibit all small children from entering the factory with their parents, the mill atmosphere was injurious to their health. He would not say that the tendency was to employ immature adults in preference to adult males. Witness had not heard of any accidents happening to children in arms brought into the mills by their mothers. Under the new system in Bombay, the age certificate was given to the boy, and the register was kept by the mill. Both the certificate and register were signed by the doctor. Witness could not say whether the atmosphere of the mills was worse by night than by day in the event of continued work by shifts. He thought that there were only one or two mills which worked now by night shifts.

Witness No. 33.

Mr. J. D. F. Engel, 1st Inspector of Factories, Bombay.

Mr. Engel.
Written evidence.

The working hours of adult males should not be limited. Every adult might be credited with having sufficient sense to judge of his own physical endurance, and be free to earn as much as his capabilities will allow. It would be most difficult to obtain proof that the physique of workers has been affected by long hours. The only evidence that their physique is below the standard (if any) would be in comparison with the ordinary town individual of irregular employment, or of persons employed in less arduous work. I believe the comparison would not be to the prejudice of the average mill hand. If the hours are to be limited, the actual number of working hours should not exceed twelve. And except when working by shifts, the legal working hours should be from 6 a. m. to 6-30 p. m. (standard time). The engine should be stopped for half an hour, from 12 to 12-30 p. m., and all work should cease, except such work as cannot be done while the engine is working. In factories working on the day shift system, the legal working hours should be from 6. a. m. to 6 p. m., and from 6. p. m. to 6 a. m., provided that no adult male should work for more than six hours in any one shift, or for more than twelve hours out of twenty-four. I am not able to say whether there has been physical deterioration as the result of illegal employment, as adults, of young persons between the ages of 12 and 14 years, and unless an elaborate system of registration and identification of "young persons" employed can be devised and carried out easily, and satisfactorily, it would be inadvisable to restrict their working hours. Such "young persons" are almost certain to be dissatisfied with their limited earnings, owing to the restricted hours of work, and to seek employment in their spare time in factories other than their own. If it is considered inadvisable to create a class of "young persons," it might be useful to maintain a special register of all workers under the age of 16. Such a register must, however, furnish particulars of the number of hours worked, and the nature of the work done. It must also be possible to identify (by body marks) the persons with the names in the register. It must also show where the person was last employed, and the dates of present employment and discharge. Without these particulars, the register would not serve the purpose intended, and considering the trouble this would involve, it is very likely that it would discourage the employment of this class of workers, where adult labour is plentiful. The employment of women by night should be strictly prohibited. The minimum age of children should not be raised beyond nine years. In view of my answer *re* the working hours of adult labour, I would advise raising the maximum age

of children from 14 to 16 years before they can be employed as full-time adults. With the system of granting certificates to children (recently introduced) it would not be too much to require that they should produce certificates of age and physical fitness before they are allowed to work. Similarly, children who have hitherto worked half-time should obtain certificates of age, and particularly of physical fitness, before they are allowed to work full-time. It should be prescribed by law that children shall not be employed, except in regular sets, either morning and afternoon sets or double sets. Factory owners should not be obliged to provide elementary education, at their own expense, or otherwise, for children working in their factories. If it is however enacted that such education should be provided, what assurance, or means of ascertaining, would there be that the so-called education is of any value? I would prefer that an enclosed space or shed be provided where the children off duty might play or rest. A rule should be made prohibiting non-working children from accompanying workers to dangerous or unhealthy parts of factories. The manager, and the person to whom the child belongs, or whom the child accompanies, should be liable to prosecution if the rule is infringed. An analytical standard of purity for air should certainly be prescribed by taking samples of air from factories in India, or the standard fixed for factories in the United Kingdom might be adopted, as I believe the factories in India would find no difficulty in maintaining it. A similar attempt should be made to prescribe a standard of moisture for the air in factories, with reference both to manufacturing processes and to the health of operatives: and here too the English standard might be adopted without disadvantage to the Indian factories. Standards of purity should be fixed for the water used for humidifying purposes. The standard of latrine accommodation might be raised to one seat for every 30 workers, and the provision of separate urinal accommodation should be insisted on. It should be prescribed that all doors of working rooms shall be hung so as to open readily from inside outwards in case of fire. Further precautions for fencing machinery are not necessary in any factory, or class of factories. It would, however, be advisable to restrict the spacing of machinery, to obviate danger to workers between any two machines, or any machine and a wall or pillar. Full-time medical inspectors should be appointed to assist the present inspectors in securing the due observance of the Act in regard to sanitation, ventilation, and the employment of children.

Mr. Engel.

Oral evidence.

Witness stated that he had had experience as engineer and manager in mills from 1889 to 1895; he became an inspector in the latter year. He was opposed to any restriction of the hours of adult labour. Witness was in Bombay in 1905 when the long hours were worked. In certain mills there were signs that the men were being overworked, but not in the better conducted ones. The mills then worked from 5 A. M., to 8 P. M., while a few went on to 9 P. M. They started by electric light, and the same set of men were employed throughout. These conditions continued for four or five months. If the market became active, and there was a strong demand, this condition of affairs might recur. He disagreed with restriction, because in his opinion the operatives had the whip hand of the employers, but did not yet realise that fact. The extra money tempted them to stay on for the longer hours. Witness would leave it to the men to decide when they had had enough. He would raise the age limit for adults, and put the adult age at 16, requiring a certificate that the employé was physically fit to do a full day's work. Witness had been through mills at 8-30 P. M. The men appeared listless and dazed, and their general opinion was against the use of electric light. The men much preferred to work by natural light. About 60 *per cent.* of the Bombay mills had electric light, and the average hours worked were 5·30 A. M. to 7 P. M. Better work could be obtained with restricted hours than when the hours were excessive. In 1891 the mill-owners agreed to work eight days short of the month, giving two holidays *per* week instead of one day, and the total output for the shortened month was only very little below the normal output of a full month. He might be able to obtain statistics on this point. The men realised that the pay would be smaller and so worked more steadily. In those days labour was not so scarce as it is now. During his seventeen years in Bombay, witness could not say that he had seen any deterioration in the health of the mill-hands. He went into the question of the absence of old men from the mills about five years ago, and the statement generally given was that on attaining a certain age the operatives retire. Members of the same family continued to work in the mill, and nowhere could he obtain the admission that the absence of old men was due to early mortality among mill-hands. If the hours were to be restricted, then 12 working hours was sufficient. In his opinion production would not suffer very much by the shortened hours, and the men would realise that they had a restricted number of hours in which to earn as much money as they could. A few mills had tried the 12 hours' day as an experiment, and achieved very good results. If the 12-hour day were fixed, it would mean the general introduction of electric light. This, however, was bound to come. One mill would follow another, and there was also the system under which agents of mills were paid to consider. The agent received three pies on every pound of cloth produced, irrespective of profits, and consequently it was to his interest to introduce electric light so as to obtain a larger production. The hands complained that this light affected their eyes, but they consented to work by it. The system of keeping the men in arrear with their wages up to one and a half months prevented the men from combining. This was quite legal according to the rules of the companies. If the men failed to give fifteen days' notice, then their wages were forfeited, and often service of the notice was evaded. It practically lay with the jobber to accept the notice. In 1905 the men struck, refusing to work at night by electric light. The strike only lasted a few days, and the men gave in. Witness would have precisely the same hours for women as for men. The present system did not lend itself to the application of any check, and women were often employed for a longer time than was allowed by law. The proposal would greatly help the labour supply, and would facilitate the inspection of the mills. Witness thought that the working hours of the mills would be determined by the hours fixed for "young persons." The extremely young adults were to be found in the ring spinning rooms. A great many of the children were not of their certified age. Sometimes the certificates were obtained by impersonation, but he did not think that this was possible now that the distinguishing marks system was in force. The certifying surgeon should be obliged to enter these marks. On an average, the doctor would have at a maximum about 20 boys a day, and the examination would occupy about six minutes for each boy. The supply of young adults was limited. They moved

Mr. Engel

from one mill to another, according to the wages offered and the treatment received. Raising the age of children for full-time work would not handicap the owners so much as the formation of a class of "young persons." He did not think that raising the age of children to 10 would affect any improvement. This would enable them to idle for another year. He had tried to test the purity of the air in several mills, but the results obtained were not reliable. Many of the mills were badly built, and some proper means of ventilation was necessary. On the other hand one or two mills had gone in for a good system of ventilation. He had no power to issue orders under the Factory Act concerning ventilation. Rule 5 about ventilation was quite impossible so far as textile factories were concerned. In his opinion proper rules dealing with ventilation should be introduced. Latrine accommodation should be one seat for every thirty workers. He considered that the overcrowding was largely the result of the idling habit. The latrines had to be cleaned twice a day to be of use, but should there be sewage connections, then the present provision was enough. Witness devoted his time half to excise and half to inspecting. He saw on an average three to four mills a day for excise purposes, and inspected about 120 mills a quarter. In his opinion there should be greater supervision, and the Act ought to be amended so as to prevent evasion. At present if a man was at all smart it was difficult to obtain a conviction. There were undoubtedly many cases of evasion of the Act. In his opinion one-fourth of the mills evaded the law as regards the employment of women and children. The operatives were generally in the jobbers' debt, and some mill-hands were so greatly in debt that they would never be free. Occasionally the operative left his mill and went to another. In this case the jobber would lose the money that he had advanced. The jobbers themselves were in debt to the money-lenders, and in their turn lent money to the operatives. To a certain extent mill operatives were at the mercy of the money-lender. Witness did not think that this indebtedness gave the jobber a hold over his men. Rather it was the other way about, and it was to the jobber's interest to keep his men together. The financial position of the mill-hand was not such that he could afford to leave his employment, but the situation should be otherwise, considering the money that he earned. Mill operatives were not independent of the industry, and had to remain mill-hands. He would prefer to start work a little later in the morning, because where mills opened at dawn it was the custom for operatives, in order not to be late, to arrive a long time in advance and then to sleep outside the mill. They had no clocks, and often the light of the moon would deceive them into thinking that it was the dawn. Where they did not work by electric light, he thought the operatives would agree to hours from sunrise to sunset. In the hot days they took matters more easily. Witness admitted that there was a large amount of drunkenness among the mill workers. In his opinion a 12-hour day would result in the improvement of the work, the men would be better able physically to do their work, and they would realise that all time wasted would affect their wages. He did not think that the men came early to work in order to get into the warm rooms. It was never cold enough in Bombay for that.

Witness No. 34.

Major A. Street, F. R. C. S., I. M. S., Presidency Surgeon, First District, Bombay.

Major Street. *Written evidence.*

I am acquainted with all classes of operatives in the cotton mills in my district, and had some experience in the ginning factories of Sind when I was Civil Surgeon at Hyderabad. I think there is no doubt that the general healthiness of the Bombay operatives is less than that of the non-factory population, though I have no statistics to offer. I think the physique of mill operatives is below the average, although aware that many come from the Konkan, where the average physique is poor. There may be now a generation growing up born in Bombay whose average may be even smaller. From my experience at the J. J. Hospital I am sure that tuberculous glands of the neck are particularly common in young operatives, and frequently point out to my students that they and firemen on boardship produce the large majority of the cases we see. I hardly remember seeing any cases of this disease when I have been certifying the children, and therefore suppose that their employment must have given rise to it; but I have no statistics to offer on this point. For the determination of the age of any particular examinee there is no *one* standard which can be relied on. Height, chest measurement as evidence of general development, and weight and general appearance, are what I rely on. Dentition I regard as of little importance, as it so frequently contradicts the other three, and I have stated already that it is most deceptive in the identification roll, as a child may easily cut four teeth in as many months, or as easily lose four. I have no knowledge of any evasion of the law in Bombay except in one case when I had to give evidence; in my opinion that child was under fourteen, and had been certified as such, but as the evidence of the two other medical men was that in their opinion the child was over fourteen the law decided that there had been no evasion. Where there is no standard laid down, and where it is not compulsory to have a certificate before employing the child, and where the opinion of the certifying surgeon is overpowered by other opinion, I think the Factory Act is not of much use in preventing evasion of its intentions. As I stated before the Textile Factory Committee, I think a child should be treated like a boiler, and not employed until certified. In Sind the appearance of the certifying surgeon on his camel was the signal for a general flight of all children able to run from the rear of the factory compound. These were mostly under nine. I am under the impression that Government have laid down the rule that the medical inspector and certifier are to be separate individuals. I think a whole-time medical inspector would be able to specialise in ventilation and humidity, and so would do some good; but surprise visits would have to be frequent; twice a year is not sufficient to see that windows, the principal means of ventilation, are always left open. I should recruit them from the Indian Medical Service, and certainly prohibit private practice, paying them at the rate they would draw if in charge of a second class civil surgeoncy, *plus* Rs. 500 and travelling allowance. I think one latrine to every 50 operatives should suffice, but more urinals should be provided. I think a certificate of age should not be given unless the certifying surgeon is also convinced that the stamina and physical development of the child is sufficient to allow of his being employed without prejudice to his health and growth. I am of opinion also that the marks of identification

are more important than all the other details noted on the certificate put together. Thumb impressions are difficult to obtain from children with sufficient clearness, and I do not know of any inspector who is qualified to give evidence as to their identification. The clerical work of making three copies of one form might be left to the mill authorities, as I think it is quite outside the duties of a medical man, whilst the remuneration of one penny for a form containing eight or more details strikes me as suggestive of sweating and derogatory to the profession which, more than any other of His Majesty's services, laid the foundation of the Indian Empire. Major Street.

Witness stated that he had had three and a half years' experience among mill operatives in Bombay, and previous to that he had two years' experience of ginning factories in Sind. He did not think that mill operatives were as healthy as those in non-factory employment, and he found a larger proportion of tuberculosis cases among mill-hands than among other labourers. He had noticed tuberculosis chiefly among the young adults ranging in age from 17 to 25. They suffered from tuberculosis of the glands of the neck; in his opinion this was due to the lack of proper hygienic surroundings. He did not think that the domestic surroundings of mill operatives were any worse than those of other classes, and so he attributed the prevalence of this disease to the nature of their work in the bad atmosphere of the mills. They might be able to obtain statistics relating to the health of mill operatives from the Jamsetjee Jejeebhoy Hospital, but he was afraid that the word "labourer" would be used to describe all forms of labour. Mill operatives were probably not specially described. Generally speaking the housing of the population was notoriously bad in Bombay, but he did not think that mill operatives were worse off than other classes in this respect. That the health of mill operatives was of a lower standard than that of people in outside employments had been his view for years. Major Childe also agreed with him, and further corroborated his view as to the existence of tuberculosis among mill-workers. Witness attributed this to the lack of hygienic conditions, of which ventilation was the most important. The younger adults while still immature had to work for long hours in a close place with a bad atmosphere. In the age test he went by height and general development. If a boy was over 4 feet he passed him as 9 years, and if over 4 feet 4 inches or 4 feet 5 inches as 14 years. He personally entered the distinguishing marks, and did not consider that there was very much evasion of the law now. A physical fitness examination for children of 9 and 14 was necessary. He examined about 35 children a week, and would reject 4 or 5 *per cent.* as physically unfit. The 1905 long hours, if continued, must have a serious effect upon the health of the operatives. He would restrict the working day to 12 hours, and he considered that women could work that period. If a 12 hours' day were fixed he would adopt a lower standard when passing children at 14 for the adult stage. Witness did not think that the ginning factories in Sind worked after sunset. Witness would be surprised if other medical men expressed a different opinion to his concerning the deterioration of the health of mill operatives. *Oral evidence.*

Witness No. 35.

Major J. H. McDonald, I.M.S., Acting Presidency Surgeon, 2nd District, and Joint Medical Inspector of Factories, Bombay.

I am acquainted with all classes of factory operatives. I am unable to supply statistics showing the relative healthiness of these operatives, as compared with the general average of the non-factory population of the same class. The opinion I have formed on this subject, as the result of my experience, is that the relative healthiness of factory operatives is not below the standard of the non-factory population. I think that the factory population is on a par with the general average of the same class as regards physique. I have been unable to obtain any definite proof that factory operatives suffer more than the general population of the same class from any specific classes of diseases, though from my medical knowledge I am inclined to believe that, where the heat and dust in the rooms are excessive, factory operatives must suffer from the effects of chills and irritation of the respiratory passages. As regards the prescribing of definite limiting ages for certain classes of factory workers, I am of opinion that the "dentition" test is the most reliable in India, as elsewhere. Though I can quote no specific cases showing that the existing law as to the employment of children in factories is evaded, I feel certain from repeated observations that such is the case, but I cannot say to what extent this malpractice is attempted. I am of opinion that the evasion is generally in the direction of employing children under nine as half-timers. I have no statistical basis for my opinion, but I think the records of prosecutions for transgression of the law in this respect will support my opinion. I am unable to see the benefits of appointing whole-time medical inspectors. I consider the standard suggested by the Textile Factory Labour Committee for latrine accommodation—one seat for every 25 persons—suitable, except where no proper drainage system exists, in which case I would suggest one seat for every 10 persons. I see no benefit in limiting the working hours of adult males; I see no justification for believing that the physique of workers has been affected by long hours. If hours have to be limited, I consider that the best method of enforcing the restriction would be to prescribe the times suggested, namely:— Major McDonald. *Written evidence.*

(1) that, except when working by shifts, the legal working hours be from 5-30 a.m. to 6 p m. or from 6 a.m. 6-30 p. m.;
(2) that the engines be stopped for half an hour between 12 noon and 2 p. m.;
(3) that in factories working on the day-shift system, the legal working hours should be from 5 a. m. to 8 p. m., provided that no adult should work for more than 12 out of every 24 hours.

I have no statistics to prove that there has been physical deterioration in the class of workers aged between 12 and 14 years, but I am of opinion that, until the age of 16, or better 17, is reached, the physique of a worker is not equal to the strain of a full working day, and that the creation by law of a special class of workers intermediate between the "half-

Major McDonald.

timer" and the "adult," and corresponding to "young persons" under the English Act, would tend to prevent physical deterioration amongst factory labourers. If it be considered inadvisable to create a class of "young persons," I think it desirable that a special register of all workers under the age of 16 should be maintained, in order to facilitate enquiries as to the physical fitness of the youngest adults to work full time. I am of opinion that women should be prohibited from night employment. I see no reason for recommending that the minimum age at which children are allowed to work in factories be raised beyond 9. I consider that certificates of both age and physical fitness should be required before children are allowed to work in factories. Similarly, before children, who have hitherto worked half-time, are allowed to work full-time as adults, certificates of both age and physical fitness to work full-time should be required. I think it should be prescribed by law that children shall not be employed except in regular sets, whether morning-and-afternoon sets or double sets I would strongly urge that a rule be made prohibiting non-working young children from accompanying workers to dangerous or unhealthy parts of factories. For this, I would suggest that no non-working child be allowed to enter the factory itself. I am of opinion that an attempt should be made, by testing samples of air taken from factories in India, to prescribe an analytical standard of purity for air in factories, with a view to secure proper ventilation. I think a similar attempt should be made to prescribe a standard of moisture for the air in factories, with reference both to manufacturing processes and to the health of the workers. I consider it would be advantageous to fix a standard of purity for the water used for humidifying purposes. The standard of latrine accommodation should certainly, I think, be raised to one seat for every 25 workers, except, perhaps, where the pan opens directly into a conduit communicating directly with a municipal drain and has ample flushing and uninterrupted flow, thus obviating any prolonged accumulation. I do not think that the appointment of full-time medical inspectors of factories to assist the present inspectors in securing the due observance of the Act would be of any appreciable benefit.

Oral evidence.

Witness stated that he had been medical inspector of factories since March, and he had also held the appointment for two years previously. Witness had not seen any special susceptibility to tuberculosis among mill-hands. He was medical inspector in 1905 when the long hours were worked. He particularly went into the question of exhaustion, and his enquiries did not substantiate the statements made in the *Times of India*. He had not seen operatives taking alcohol when leaving the mills in order to sustain them. The hours worked were certainly too long, but then the men were in the habit of idling as much as they possibly could. After a certain amount of time the men could not do good work He should put the working day at 12 hours, and say that after that period there was a likelihood of exhaustion. Witness based his age test on dentition. He had taken the different authorities, Foster, Barry and Gray, as well as the statistics drawn up by Dr. Powell and quoted by Barry. He would not say this test was strictly accurate, but he was aware of no more reliable one, and he would prefer not to depend solely on physique. If he found a boy with the anterior bicuspid he considered him over nine years. He had found children standing 3 feet 9½ inches with fairly good teeth development. He agreed that there was no absolute standard, but he considered dentition the safest guide under the existing law. Witness had examined a large number of children and had not specially noticed a particularly large number of tubercular cases. In 1905 the mill managers drew his attention to the long hours worked while he was going round the district for his own information. He wanted to examine the condition of the people as a whole, and endeavoured to obtain statistics regarding their diseases He was unable to obtain statistics and did not make a report of his visits. If an employé were absent and witness asked for him he found it impossible to obtain reliable information. The man might be ill, he might be working in another mill, or he might have left the district. He considered that his complaints recorded after inspections were attended to. Ventilation was a very difficult matter, and he had frequently referred to the lack of it in his report. The Government inspector had no voice in the matter of erecting new latrines. He agreed that the septic tank system was the best.

Witness No. 36.

Captain W. M. Houston, M. B., I. M.S., Personal Assistant to the Surgeon General with the Government of Bombay.

Captain Houston.
Written evidence.

I am strongly of opinion that the working hours of adult males should be limited. I have no evidence to prove that the physique of workers has been affected by long hours. In this connection, however, it must be remembered that the factory population is to a certain extent a floating one. Operatives do not spend their whole lives at the work as they do at home. Many of them are drawn from the *mofussil*, particularly in times of scarcity there, and return for agricultural work. Again, I think it will be found that the more permanent workers often take "a day off." During the actual day's work there is a good deal of idling in the mill, and the operatives frequently retire to the neighbourhood of the privies for a smoke. All these conditions, of course, tend to annul any evil effect on the physique which long hours and constant years of work would, in my opinion, undoubtedly cause. I have often discussed this question with mill managers, and they all seemed to be very keen on a 12 hours working day, and were of opinion that they could get as much work out of operatives contentedly for 12 hours a day as out of men working half-heartedly and discontentedly for 14 hours a day. If 12 working hours a day should be fixed I am of opinion that the hours should be from 6 a.m. to 6-30 p. m. with half an hour's interval, which should be from 12 till 12-30. I recommend these hours because I consider that 5-30 is a little too soon to commence work, as many operatives have to walk a considerable distance to the mills, and because there is better light at 6 a. m. than at 5-30 a. m. Also, for those who wish to do so, it will give an extra half hour for taking a little food before proceeding to work. I consider 12 to 12-30 the best time for the interval because, if later, many operatives will refuse to wait so long for their food, and will simply, as I have often seen them do, sit down in a corner of a dusty room and eat it. I understand that the majority of workers go to the mill without touching food. This is particularly the case in those mills which start work very early. I consider,

however, that the ideal hours would be from 6 to 9 a. m, with an interval from 9 to 9-30 a. m. for food. Then work from 9-30 to 3 p. m., with an interval from 3 to 3-30 p. m. for food and rest. Then work from 3-30 p. m. to 7 p. m. This, however, would entail shutting down machinery twice a day and for that reason I fear is impracticable. I consider the engines should be stopped for half an hour, corresponding to the half hour's interval for food and rest. If this rule is not enforced, it opens a way for abuse. In factories working on the day-shift system, I see no strong objection to the legal working hours being from 5 a. m. to 10 p. m., provided that no adult male works for more than 12 out of every 24 hours. In fact, I think it should be left to the Chief Inspector of Factories to decide in any particular case whether the hours should not be still further extended. I know of one spinning mill in Bombay which at one time worked both day and night, and from my inquiries I understood the hands did not object to the system. I regret I am unable to recall with certainty the particular mill, but I think it was the Matunga Cotton Mill. My experience of Bombay mills has led me to believe that there is not much illegal employment of persons between 12 and 14 years of age as full-timers. Consequently, I do not think there has been any physical deterioration due to this cause. Nor do I think that there is any necessity for the introduction of an intermediate class corresponding to "young persons" in England. It would be exceedingly difficult, besides, to carry out in this country. Moreover, such a rule would diminish the bread-winning power of a family working in a mill. Captain Houston.

If children entered a mill at 9 years of age, and remained in it as half-timers till they were 14, a special register, as suggested, of all operatives under 16, would be both interesting and useful for the purpose indicated. But my opinion is that the half-timers are a very floating population. I doubt if 10 *per cent.* of the half-timers in any Bombay mill have worked in that mill for more than a year. It is certainly very rare to find a half-timer who has worked constantly in one mill for 3 or even 2 years. I am of opinion therefore that the special register referred to would serve no useful purpose. As it is the young married women with children we generally find working in mills, I am of opinion they should be prohibited from working at night. I think 9 is quite too young for half-timers, particularly so as the certifying medical officer has often to give the benefit of any doubt as to the age to the child. I am strongly of opinion that the minimum age should be raised to 10, I quite understand that this rule would lessen the total earnings of a family, by preventing a child working between the age of 9 and 10 years. It is also argued by some that the child would spend his or her time in the gutter and in mischief, and would be far better occupied in a mill doing useful work. There is some force in this, but it is impossible to legislate for everything, and at any rate the child will get fresh air in the gutter, which is unfortunately often more than can be said for the mill. I am strongly of opinion that it would be for the child's benefit to raise the minimum age to 10. I know of one medical officer of large mill experience who considers that the half-timer's work consists rather in play than work, and that it is very light in its nature, and he is therefore averse to raising the minimum age to 10. I regret I cannot agree with him. I have often watched for long periods half-timers at work, and I do not consider it by any means light. The question whether certificates of both age and physical fitness should be required before children are allowed to work in factories cannot be replied to by a direct positive or negative. When inspecting medical officer of factories in Bombay, I found that it was a hardship on the mill management to insist on a child being certified *before* being actually entertained, and for the following reason. What actually happens is that mills have either to send their newly entertained half-timers to the office of the certifying surgeon, or they have to call the certifying surgeon to the mill. Whichever course they adopt, it is very inconvenient for them to have to carry it out oftener than once in ten days. Hence if a mill has a batch of half-timers certified say on the 1st of the month, it should be allowed to employ, *at its own risk with regard to age*, those half-timers who offer themselves for employment after the 1st of the month and before say the 10th, when the newly collected batch of half-timers must be examined by the certifying surgeon. If a child is not employed the moment he presents himself at a mill, he simply goes to the nearest mill and seeks employment there, and the first mill loses a hand. It should be remembered, too, that many mills have to send their children long distances, often many miles, for certification, in charge of an overseer, and it would be a great loss of time and money if the mill had to send to the certifying surgeon every child as soon as he offered himself for employment. I now beg to refer to a most important point. *It should be legislated that the certifying surgeon's opinion as to age should be absolutely final.* Most unfortunately there are no definite signs of age of either children or adults, but it may be taken for granted that the certifying surgeon will err, when in a state of hesitation, on the side of leniency, and will give a child of about 9 or 14 the benefit of the doubt. If a mill is prosecuted for employing an underaged boy, it will, I fear, have no difficulty in procuring medical evidence to swear that the boy is not underaged, in spite of the certifying surgeon's opinion. I am most strongly of opinion that if my suggestion is not made law, the certifying surgeon's certificates of age will be of little value.

I consider that a physical fitness certificate as such for children before being allowed to work in factories is not necessary, but I am of opinion that if the certifying surgeon considers a child physically unfit he should have power to reject him. Under the present law, a child may be far gone in consumption, and yet the certifying surgeon must pass him, if not under age. Children should be physically examined. An elaborate examination, such as is required for life assurance, need not be carried out, but one sufficient to detect diseases such as consumption, heart disease, enlarged spleen or liver, rupture, &c., &c. Even such an examination would increase the present work of a certifying surgeon very much, and would call for more remuneration than the present four annas a head. I see no necessity for *requiring* certificates of age from children who have hitherto worked half time before they are allowed to work full time. If the mill authorities believe that a half-timer has reached 14 years of age, they will, in their own interests and to safeguard themselves against prosecution, have the boy or girl inspected by the certifying surgeon, before putting him on as a full-timer. If they do not do so, they run the risk of being prosecuted, and it is exactly in cases of this kind that my suggestion made in the previous paragraph regarding the certifying surgeon's opinion as to age being final applies. Nor do I think certificates of fitness should be required in such cases, but here I beg to suggest that an inspecting medical officer, or indeed any mill inspector, should have the power to send any child or adult whom he sees working in a mill, and

Captain Houston.

whom he thinks physically unfit, to the certifying surgeon for medical examination. The certifying surgeon would thus have the power of rejecting, as physically unfit, any child or adult, and of preventing him continuing to work in the mill. Children should certainly be employed in regular sets. I believe it causes no trouble to the mill to do so, and it greatly facilitates the checking of registers by the inspectors. I do not consider that factory owners should be compelled to provide elementery education at their own expense for children. Education could not help them at their work then or afterwards when adults. Any parent who was keen that his child should learn to read and write could doubtless find outside means of attaining this object. Non-working young children should not be allowed inside the factory at all. Almost every part of a factory where there is machinery is dangerous for young children unacquainted with the working of the machinery. If non-working young children are allowed inside a mill, it opens a fruitful road for abuse. I frequently found young children in the Bombay mills actually working, and covered with cotton fluff and debris, and on failing to find their names on the registers was informed by the jobber that they had come with their parents' food and were working without his knowledge. All that is necessary is to have a rule prohibiting any but *bonâ fide* workers from entering the mill buildings I understand that a good many samples of air have been collected in the Bombay mills by Mr. Chambers during the last year, and submitted for examination to the chemical analyser to Government. Particular attention should be paid to " gasing rooms "; one such room can be seen in the Sassoon and Alliance Silk Mill and I had always to complain of the vitiated state of the atmosphere there. An attempt should be made to fix a standard of purity for air. A standard of humidity should if possible be fixed. I have no hesitation in saying that the air is often over-saturated, and must act detrimentally on the health of the operatives, particularly when over-saturated by steam. I recollect one case when in a weaving room with a fairly high temperature there was a difference of only 2 degrees between the dry and wet bulbs. The workers were literally bathed in perspiration. On stopping work and going out into the open air the workers are particularly liable to catch serious chills and even pneumonia. On remonstrating with the manager, a European, he told me that it was necessary to have a high degree of moisture, having regard to proper manufacture, but I can hardly believe it is necessary to have such a very high percentage of saturation, at a high temperature. This opens the question whether rooms should be humidified by the cold spray or by steam. I am not prepared to give a definite opinion on this point with regard to the manufacturing processes, but from a health point of view the cold spray is undoubtedly preferable in climates like that of Bombay. A standard of moisture should be prescribed; hygrometers should be carefully looked after, and readings recorded at least twice daily. If an inspector should find that the water for the wet bulb has been allowed to evaporate, a fine should be imposed. A standard of purity for the water used for humidifying should also be fixed. I believe that the present accommodation of one seat for every 50 workers is quite sufficient. More privy seats will only lead to more idleness. Most decidedly separate urinal accommodation should be insisted on. I consider it an urgently required necessity in the mills. In those mills where such accommodation does not exist, a person is supposed to go into a privy—more often than not a foul-smelling one—to micturate. But he never does, and I confess my sympathies are all with the man. The result is that the ground in the neighbourhood of the latrines is always fouled with urine. It would seem natural to hang all doors so as to open readily from the inside outwards in case of fire. The administration of the Act should be made uniform throughout India as far as possible. Having been a medical inspector, I have given the question close thought and consideration for a good time past, and I am most decidedly of opinion that not only would full-time medical inspectors be a great expense, but they could not carry out the work as well as it is done at present, provided the number of inspections remains the same. There is such a thing as over-inspection and harassing mills, and I consider that twice a year is sufficient, for inspection by a medical inspector. I am forced to say that a successful medical inspector is not required to show any great display of medical ability or cleverness, but if he is cute and wary enough to outwit jobbers and mill managers of a certain class, he is much more likely to be a successful inspector. How often an inspector sees the windows fly open on his entering a mill compound, and unless he enters a mill at once, he has very little chance of catching uncertified half-timers. *To be successful, an inspection must necessarily be in the nature of a surprise visit.* If a mill knows that an inspector is coming, windows are thrown open for ventilation, and uncertified half-timers are soon hurried away, and any other irregularities are soon righted. Supposing, for instance, there was a full-time inspector for this Presidency, and he went say to Dhulia to inspect the mill. I have no doubt at all that news of his alighting at the railway station would be sent to the mills long before he ever got there himself, and the object of his visit would be to a great extent frustrated. I believe that the present system whereby the local district surgeon is the mill inspector could not be improved upon. He is in a much better position to make a surprise visit. I quite admit that full-time medical inspectors should be appointed if their duties were such as to require very special training or special medical or sanitary knowledge in the work of mill medical inspection. But I say most emphatically that it does not. It does not require a specially trained medical inspector to say that a latrine is dirty or that it is not sufficiently flushed or that it smells badly. It requires no special sanitary training to say that a room is stuffy and ill-ventilated, especially if a standard of purity is laid down, and a non-medical inspector can take away a sample of air in a bottle. It does not require any special knowledge to say that the atmosphere of a room is over-heated or over-humidified; the thermometer, the hygrometer, and the standard tables can be read by any one as well as by a medical man; it requires no special medical knowledge to say that a compound is dirty, that the inside walls of a mill room would be the better of being lime-washed, or that the reserve supply of drinking water is insufficient. Nor can a medical inspector say for certain that the quality of the drinking water is bad. He must take away a sample in a bottle for analysis by the chemical analyser or a bacteriologist. But the non-medical inspector can do that just as well. It may be argued that the full-time experienced medical inspector can lay his hand with unerring certainty on the half-timer under 9 or the full-timer under 14. Unfortunately he cannot, nor can the most experienced professor of anatomy or anthropology in the world do so. The district surgeon can do it as well as a full-time medical inspector could. The stating of a child's age is only a matter of opinion based on experience and observation. A non-medical inspector can, after a little

experience, give a fairly good guess at a child's age, and it is open to him to send any child he wishes to the certifying surgeon for examination as to age. I am, for these reasons, most strongly of opinion that medical inspections should not be more frequent than they are at present, and that the district surgeon is quite as efficient as a full-time medical inspector, and even more so, as he is in a position to make surprise visits which a full-time man would not be. My experience is limited to the Bombay mills, where most of the operatives are *mahratta ghatees*. There are also a good many Mahomedans. They comprise workers in spinning, weaving and dyeing mills, cotton presses, iron foundries, printing presses, and one paper mill (the Girgaum Paper Mill). I am unable to supply any statistics as to the relative healthiness of the factory operatives. I have formed no definite opinion as to whether the healthiness of the operatives in the Bombay mills is better or worse than the non-factory population of the same class. I have never had any connection with the large Bombay hospitals where such information might be obtained. I, however, think that the factory population is as healthy as the non-factory. But I believe that, under existing circumstances, if a boy entered a mill at 9, remained as a half-timer till 14, and then as a full-timer for say 30 years, and always did a hard day's work, his health would suffer. From my limited experience, my opinion is that the factory population is the same in physique as the non-factory population of the same class. I am not aware that the operatives in Bombay mills suffer more than the general population of the same class from any specific classes of disease. I can supply no statistics on this point. It must, however, be borne in mind that the factory population is to a certain extent a floating one, and that but few people spend many years of their lives at the work. Unfortunately nature lays down no definite index as to age, and the determination of a child's age is largely a matter of opinion based on experience. I have examined the teeth of several thousand children in Bombay and believe that no definite conclusion as to age can be drawn from their number. The presence of the first bicuspid tooth certainly helps one to say that a child has reached 9 years of age, and the presence of the third molar that the child has reached 14, though I have seen several children with the third molar who were not, I believe, more than 13 years old. My experience of one year as medical inspector in Bombay leads me to believe that the existing law as to the employment of children is not evaded, nor do I think mill managers have any desire to evade the law, nor anything to gain by doing so. I always paid particular attention to this point at my inspections. I cannot exactly recollect, but I believe that only one or two prosecutions were instituted against mills as the result of my finding uncertified children at work during my year in Bombay. One or two cases were let off with a warning, as it was a first offence. Should it be eventually decided to employ full-time medical inspectors, I am of opinion that they should be recruited from the Indian Medical Service, from among special applicants for the posts. They should be probationers for a period of 2 years, and should then be given the option of reverting to their original employment or remaining permanently in the department as factory medical inspectors. The pay should be very liberal, as they would lead unsettled lives, and more arduous, trying, or uncongenial work could hardly be found for a medical man. It would, I consider, be worse than useless to appoint as medical inspector a member of the Subordinate Medical Service. He would often receive scant courtesy in a mill. There would be no objection to laying down that he should not be permitted to engage in private practice, but it is extremely unlikely that a doctor engaged purely in mill inspection work would gain much reputation as an expert physician or surgeon. His opinion on medical and sanitary matters—other than the age of children which should be decided by the certifying surgeon—should be final and he should be responsible solely to Government.

Captain Houston.

I beg to refer to the following matters.

Ventilation.—There can be no doubt that the present arrangements for ventilation in many of the Bombay cotton mills are unsatisfactory. Were the majority of the windows kept open, ventilation would be greatly improved and probably sufficient in most cases. But if ventilation is to be limited by windows which can be opened and closed at the will of any operative, ventilation will remain unsatisfactory. It would be a simple matter to improve this defect, but it must be legislated for. Further I am of opinion that plans of the method of ventilation of proposed new mills should be submitted to the medical inspector of factories for approval before being built. It is he who is particularly interested, and it is he who will have to subsequently find fault with the ventilation if any is to be found.

Latrines.—I am of opinion that, where the cost is not prohibitive, and when mill latrines are situated at only a short distance from sewers, mill-owners should be compelled to introduce the water carriage system, and lay down sewer pipes. In this respect, however, I understand that but little encouragement is given by the Municipality to mill-owners. I would instance the case of the Burma Oil Works near Sewree, Bombay, which undoubtedly possess the most model latrines of any factory in Bombay. The manager informed me that they pay exactly the same municipal *halalkhore* tax as they did before they built the latrines on the water carriage system, although a municipal sweeper is now never required to visit the latrines.

Number of working hours for engineers.—I beg to request the Commission to enquire into the number of working hours of engineers. It was only at the very end of my year's work in Bombay that I received a complaint from a Parsee engineer who said that he had to work from 4 a. m. to 8 p. m. and he informed me that many other engineers had to work equally long hours. I regret that I am unable to give more definite information on this point.

Overtime.—Although I have recommended 12 working hours a day for an adult man, I cannot but consider it would be a hardship on both mill-owners and operatives to absolutely restrict them to these hours in times when the cotton trade is booming, or when the pressure of work in mills is enormous. But I consider that, if a mill wants to work overtime, it should show good cause for the same, that no operative should be allowed to work more than 13½ hours a day, and for not more than two months in the year, and that a mill should have to apply for special permission to work overtime.

Phthisis in Bombay.—It is now an established fact that phthisis is exceedingly common in Bombay. I believe I am not exaggerating when I say the death-rate from this disease is enormous. Granted this fact, it must not be lost sight of when considering the health of the very large mill population in Bombay city, and the ventilation and sanitation of mills. I desire to

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bring strongly to notice that a very small percentage of persons suffering from phthisis, and working in a mill room, particularly an ill-ventilated one, are capable of giving the disease to other fellow-workers. They expectorate on the floors and walls, and it is easy to conceive that an atmosphere laden with dust and cotton debris can form a very ready means of conveying about the tubercle bacillus. To mitigate this evil, I would recommend that floors should be regularly washed with strong antiseptic solution, and that walls should be lime-washed to a height of six feet every four months.

Oral evidence.

Witness stated that from March 1906 to March 1907 he had acted as medical factory inspector in the city of Bombay. In his opinion the mill population was essentially a floating population, and was not continuously at mill work. He could not account for the absence of elderly workers unless they retired to their fields for easier work and to live, according to the Indian custom, on the labour of their children. He did not suggest that the hard work meant early mortality. Witness considered that the long hours of 1905 would in the long run be detrimental to the health of the employés. He approved of a 12-hour working day, but doubted if the mill-owners would agree to it, unless they could enforce stricter discipline among the men. However, if the 12 hours' day had already been successfully tried in certain mills, then perhaps the owners would agree to it. He agreed with giving the benefit of the doubt in regard to age to the boy of 14. This made the boy a more valuable member of the family as a wage earner. There were, of course, many youths doing a full day's work who were not adults. He thought that this difficulty could be got over by raising the age of half-timers to 15, which would obviate making a class of "young persons". It would be extremely difficult to work an intermediate class in India on account of the lack of system in the working of the mills. Very often a child of 9 was hardly fit to do a half day's work. He did not agree with raising the adult age to 16, as this would strike too hard at the wage earning-power of a family. An inspector should have the power to send any adult whom he thought weakly or physically unfit to the certifying surgeon who should have the power to reject him. Witness would sacrifice the individual for the benefit of the community. The medical officer should certify the child and young adult as of a certain age and "fit". If a boy of 14 was rejected as an adult, he would contemplate giving him a certificate of fitness as a half-timer. Of those whom he had seen working in mills he would have rejected as unfit about 5 *per cent.* both at 9 and 14 years, had he had the power. The certifying medical officer's opinion as to age should be final. He had heard of one case being contested. The age test was purely one of experience. Witness went on Powell's standard in regard to dentition, and put this to the test. If the child had the first bicuspid tooth, then he was probably over 9, and if the third molar, 14. The third molar was often present at the 13th year, and even at the 12th and so this could not be called an accurate test. The first bicuspid at the age of 9 was, however, a fairly good test, but witness would not be justified in rejecting a child even if the first bicuspid were not present. Generally speaking the dentition test was not of much help. He had tried to obtain data to go upon, but had been unsuccessful. He agreed that the child should be permitted to work in the mill for a few days before being certified, and did not think that the owners would take unfair advantage of this concession. The rules regarding children were not evaded to any great extent. The present inspection was thorough and quite enough; there was such a thing as over-examining. The child would not be lost sight of, for his name would have to be entered for examination. There was the chance of his name not being entered, and in that case the defect would only be brought to light by catching that particular child. The mills in Bombay were not as a rule well ventilated. The windows were always closed, and were useless for ventilation purposes. The David Mill had fans. Witness had been through the mills at the hottest time of the year, and though the atmosphere might seem close and stuffy, yet he did not think one would be justified in saying that it was absolutely vitiated. The windows were kept closed for fear of the breeze snapping the threads. Even in the hottest weather the windows were closed, and in his opinion the operatives themselves preferred it so. Standards of humidity would have to be local. The present latrine accommodation was enough. If they were overcrowded it was due to the loitering habit. Urinals were badly wanted. Where these had been provided they were used for their proper purpose. He had always found that his complaints about the dirtiness of latrines had received attention. Phthisis was prevalent in Bombay, but was not specially prevalent among mill-hands. He could not say whether pneumonia was increasing in Bombay. He did not think that the death statistics of the City would be of any material use, for only about 45 *per cent.* were properly certified. If working hours were to be restricted, he thought it might be a hardship to both mill-owners and employés if they were never to be allowed to work overtime when trade was very flourishing.

Witness No. 37.

Mr. A. K. Leslie, of Messrs. Greaves Cotton and Company, Bombay.

Mr. Leslie.
Written evidence.

I am a partner in the firm of Greaves Cotton and Company, who are the agents for the following cotton spinning mills, working the number of spindles and employing, nominally, the number of hands mentioned against each:—

Mill.	Spindles.	Mill-hands	Reelers.	Total.
New Empress	41,824	986	626	1,612
Howard and Bullough	43,824	948	685	1,633
Connaught	32,760	815	442	1,257
Apollo	45,232	850	562	1,412
Empress	34,680	590	410	1,000
James Greaves, ...	38,124	602	498	1,100
Imperial	38,016	584	450	1,034
Leopold	15,664	430	250	686
	290,124	5,805	3,929	9,734

It has been our practice for many years to work from daylight to dark at all seasons of the year, thus roughly according to season the mills have run from a maximum of 13-22 hours to 11-8 hours, with the usual half hour stop in the middle of the day. It was at one time our intention to run the mills for 13 hours daily, irrespective of the hours of daylight. But whereas in the long days when we began the experiment our hands appeared to have regarded the policy of not availing of the full hours of daylight as a peculiar one, when the shorter days and the longer nights came on, we found it impossible to run the mills by electric light for more than a few minutes. In other words our workpeople, being accustomed to work from daylight to dark, objected to any change in the custom. It is generally admitted in India that good and economical spinning is not produced for a brief period immediately after starting and immediately before closing. Operatives with us do not come punctually to work, or work on necessarily to the last minute; and in this respect, as in many others, our procedure does not coincide with that which obtains in England. Whilst stating generally therefore that the first 15 to 20 minutes, and the last 15 to 20 minutes, work may compare unfavourably with work at other times of the day, I am unable to give any statistics in confirmation of this fact. On comparing the normal production of a long day with the normal production of a short day, the economic results are in favour of the long day. As regards the medical certificates for half-timers, I do not think that any hardship is caused, or the law improperly evaded, by allowing such half-timers to work before examination, or, in other words, between visits of the certifying officer. And if certificates for physical fitness are considered necessary, this procedure might be adopted and be made applicable in all cases where the law insists upon examination. I am of opinion that the question of physical fitness should be left well alone: and I beg reference to my letter of the 26th July 1906, attached hereto on this subject. I do not know that there is any practical difficulty in the re-examination of half-timers before they become adult labourers, where their promotion takes place in the same factory. But unless the system prevailing in many continental countries is adopted, whereby every worker is registered and provided with a "cahier", I think any system of the description contemplated would be easily evaded: and that if the "cahier" system is made applicable to factory hands—many or most of whom are only factory hands for portion of their lives—it would be unfair and impolitic not to apply it to everybody, no matter what his calling may be. I fail to see that anybody can devise efficient safeguards unless and until every worker is registered and is forced to carry about his life-record with him. But the working of such a system in India does not strike me as being within the sphere of practical politics. I deal with the question of "young persons" in my letter before referred to. If a restriction is put on the hours of labour of the male adult, I think it should be general and not specific; by this I mean that if a man may work for 12 hours out of the 24, a latitude should be given and the period should not necessarily be, say, from 6 A.M. to 6 P.M. And unless restrictions are enforced which would compel our labour to commence at the hour stipulated and to continue until the hour of closing, the time of starting the engine, and the time of stopping it, would always be more than the actual period of full work done. I regard the conditions of factory labour in India as so wholly different from the conditions prevailing in the United Kingdom that the entertainment of inspectors from England for factory work in India would prove unsatisfactory to masters and to men. Such inspectors would have to learn local conditions, and the peculiarities of local labour which would take them a very long time to do, and any attempt to apply the stringent methods which obtain at home would hamper owners and be resented by labour to such an extent that we should have difficulty in manning our mills. In the absence of any concrete idea as to what form new laws would take, it is not possible to say what provisions would be necessary to ensure elasticity in them; but if stringent laws are contemplated on the lines of those obtaining in England, it seems to me that the severest blow which the legislature could give to the industrial development of India will have been delivered, and that the effect would be disastrous. I am not in favour of limiting the working hours of adult males engaged in manufactures any more than I am of those engaged in agricultural pursuits. At various stages and at different times our mill-hands are for the most part agriculturists—I again beg reference to my letter previously referred to. As to the physique of mill-workers being affected by long hours it is not very clear what is meant by this, as applicable to the mill-hands of Bombay. Is it supposed we have a well-defined race of mill-hands who have got to be mill-hands or starve, as is the case in many manufacturing centres in England and elsewhere? If so, we might have some means of comparing the physique of mill-hands with that of others. But there is no such class with us. As to the illegal employment as adults of persons between the ages of 12 to 14, I am not aware myself of any such practice, and it is against the law. I am not prepared to express an opinion on the general question as to whether night work by women should be prohibited. The women in our mills are reelers and waste pickers, and they take no part in the actual manufacture of yarn, and never work after dark. But in some factories, more particularly ginning factories, labour restrictions of any kind should be avoided. I do not know that I have any particular objection to the raising of the minimum age of children from 9 to 10, but I do not think any change is called for. A weakly boy of 9 may by working secure the means of being better nourished, and at 10 years of age may be a more robust child than if he had been debarred from working. I really don't know why mill-owners should be faced with the question of the provision of elementary education at their own expense for children working in their factories, or why they should be singled out for providing free education in this country. If primary education is compulsory, everybody will have to conform to the law. If primary education is compulsory the State must provide it: if primary education is not compulsory, it is not apparent how Government or the mill-owners propose to *make* children attend mill-owners' schools. I speak advisedly, because we had a school for several years. It was a pretty institution on occasion when the agents or visitors were about, but the children who ought to have attended it regularly were quite sharp enough to know that we could not *compel* them to do so, and so there was no regular attendance or any material benefit to them from the facilities we supplied. The introduction of non-working young children into our mills is always discouraged, but if actual prohibition took place hardship would be caused in many instances. It is to the advantage of all employers to do anything and everything to enable their employés to carry out their work under hygienic

Mr. Leslie.

Mr. Leslie.

conditions. The advantage may not be sufficiently recognized, but I doubt the practical use of testing samples of air taken from factories in India, nor does it seem possible to prescribe analytical standards of purity which shall be common to them all, or which under everyday conditions could everyday be obtained, unless the whole system of ventilation throughout a mill is under absolute control. This can only be done by installing special appliances for the purpose, which are more or less costly, and which in factories of some design could not be installed at all. Several systems have been introduced, but none have yet worked long enough and under all climatic conditions to stand the test of time. We are at present installing at the Howard and Bullough mill the system designed by Hall and Kay for *humidifying* and ventilating, and part of the installation approaches completion. We believe it to be the best system on the market, but we cannot speak definitely of its economic and other advantages until we have tested it. The construction of most humidifiers necessitates the use of clean water of normal density, and any legislation on the subject therefore seems unnecessary. I consider the present standard of latrine accommodation sufficient for all requirements. The habits and customs of the people are filthy beyond description. We have urinals, but they are not invariably used as such. As to the way doors should be hung, I am of opinion that unless any part of a factory is evidently and unmistakeably dangerous no changes in the designs of buildings or their parts should be introduced with retrospective effect. If further precautions for fencing machinery are necessary, I submit that Government should say what is wanted and clearly define its requirements before machinery is imported into India. Machinery is not made in India, and it has been a very great source of irritation and expense to factory owners to conform to the various peculiarities, if not fads, of many inspectors who before they were inspectors had very often only a limited knowledge of machinery. We recently had, at considerable cost and trouble, to fix up a guard to a belt running between a mill and its reeling room. It had never done any harm to anybody for 27 years, and in most mills there are dozens of horizontal belts which cannot be conveniently guarded and which do no harm. We have had too to make hundreds of castings for the protection of gearing on old machines because more modern types have come out with such protection. No reason occurs to me as to why uniformity in the administration of the Factory Act throughout India should not be secured. I do not think full-time medical inspectors of factories are required, or know how they would find enough work to do to justify their existence, unless they adopted vexatious and inquisitorial methods.

Enclosure.

Bombay, 26th July 1906.

MY DEAR—

I have delayed answering your letter of the 6th instant in order that I might have time to weigh up the problems you put before me as carefully as possible. I must digress somewhat before tackling the direct questions you ask me and do so with the sole object of trying to throw as much light as I can on the matters under reference.

2. I have not refreshed my memory by rereading the sensational articles which appeared in the "Times of India" last autumn, and to which you refer. But it seems to me that a very great many other things might have been stated with more reason.

3. It is admitted, I think, that legislation with a view of restricting the working hours of adult males is undesirable, and I cannot imagine that any human being is capable of working *strenuously* from 14 to 15 hours a day for 6 days a week without breaking down. But our people do not work strenuously, for if they did, we could do with considerably less than half the number of hands we employ inside our mills. It is misleading, therefore, to argue that because our mill runs for so many hours, the operatives are consequently fully engaged and working hard during that period. I am troubling you with this branch of the subject at some little length. I find from information given me by one of my managers who has had experience both at home and in India that to work a particular one of our mule mills at home on the average counts we are spinning, including all hands from the card room to the mule room, would take 115 men, 87 women and girls or a total number of 202, all told. The number of men including doffer boys we actually have to entertain for the same work is 453. I have not taken the mill right through so as to embrace all hands, otherwise the difference in numbers would be far greater, for we have many auxiliaries who have no counterpart at all in an English mill.

Engaged in our mills from blow room to spinnings inclusive, I find that from January to June last we had an average total of 5,639 hands.

I also find that 8½ per cent. (481) obtained and availed of casual leave running up to two months during the same period, and that there was a further average of 8½ per cent. (485) of absentees daily who were away without leave.

But the most astonishing figures in this respect are to be found in the number of people who applied for what is known as "leave altogether," or, in other words, resigned. These total no less than 2,158 and represent 38 *per cent.* of the total number of people employed. I must confess that these last figures come as a surprise to me for they go to show that some 18 months is really the maximum period for which a mill-hand works in a Bombay mill at one time. I knew of course that the period of working was not a long one, but I did not know that it was actually so short as it must be by the figures disclosed.

The accuracy of the returns, which have been specially prepared and give the names of all the parties who have resigned, is, I think, beyond question, but I am not going to send you the several quires of foolscaps on which the information is recorded unless you would like to have them.

The deductions to be drawn from the above facts are such as very clearly indicate to my mind that the mill labour problems of this country differ widely from the mill labour problems of Europe.

4. The atmosphere of cotton mills is another factor about which there has been a good deal of misrepresentation. I readily admit that the atmosphere of any of the Bombay mills of my acquaintance is not such as prevails on, let us say the top of Malabar Hill, but so far as my experience goes I assert without fear of contradiction that the atmosphere of most, if not all, of our local cotton mills is infinitely better than the atmosphere prevailing in the homes of the operatives and is no worse than the atmosphere most common to Bombay. Mr. Leslie.

The whole question of atmosphere must be one of comparison, and I am strongly of the belief that the atmosphere of our cotton mills is much more free from harmful constituents than the atmosphere of the rooms in which our mill-hands live. I do not advance this as any reason why we should not strive to improve the hygienic conditions of our mills; but I do consider it is time that the question of the atmosphere of our cotton mills should not be regarded from the sentimental side, or on a beatific basis only.

I don't think it can under any circumstances improve the physique of any race of animals to work its immature members for long hours or at too tender an age, but to draw the age limit for children in cotton mills in India is not, I consider, a matter which can be judged on European standards.

It is beyond dispute that the children of this country are not so well developed physically as children of the same age in Europe, yet I imagine that in powers of endurance the children of this country compare favourably with the children of the same age in Europe, in the same way that adult natives can live and flourish on a diet and amid surroundings that would kill off Europeans.

The question here, I take it, is not so much "does work in our cotton mills tend to physically deteriorate the young people of the present generation engaged in them" as "will the effect show in the next generation"? On balance I should be disposed to believe that the children born of mill operatives will compare not unfavourably with the children born of other parents in the same classes of society, from the fact that the mill operatives are in a position to do better for themselves than more poorly-paid people.

Children are seldom free agents any where, and though we are accustomed to regard childhood as the period of physical and mental freedom, to the Indian child as to his parents, play, such as we understand it, is practically unknown, and school is not so far a diversion or a labour which our Indian children can be legally driven to.

If therefore the children we now entertain did not come to us, they would probably not be so well nourished physically, and in mental training and development they would gain no advantage.

It is possible that a great many of the children employed in mills contribute their wages in whole or part to the family purse, and as regards girls, I think this fact may help to postpone the marriage age, for a girl who is married would at puberty have to go to her husband and his family would then secure her earnings.

We appear to have 932 young men whose ages range between 14 and 18 and average something under 16 years. Of these only 7 *per cent.* appear to be married, and of the married only a small proportion are living with their wives.

Of the young women ranging from 14 to 18, we only seem to have 138, of whom 34 *per cent*, are married and 66 *per cent.* unmarried, and of the married about two-thirds are living with their husbands. Most of these people are Marathas, to whom I understand the marriage of girls before the age of puberty is more or less of a religious obligation, but it would appear that if this is the case, some reason stronger than religion influences our mill-hands in this matter.

One of my native assistants informs me from enquiries he has made that probably 40 *per cent.* of the young men and women employed have lost their fathers and are in consequence bound to contribute their share to the support of the other members of the family, whilst a number approximating to 25 *per cent*, or 30 *per cent.* are left to their own resources entirely owing to the deaths of both parents, and such full orphans, whether from poverty or otherwise, do not apparently marry at so young an age.

Still there can be no doubt about it that a very large proportion of children born in India are the offspring of parents married at an immature age and where such is the case can one expect strong robust constitutions and proper physical development? A good many problems in this country would solve themselves if all animals could be bred from mature stock only; but I don't think the mill-owners in India are contributing directly or indirectly to the deterioration of the physique of the people; nor do I think they are helping to produce—as are admittedly certain industries in Europe—a distinct order of weaklings.

5. After what I have said, I think, I must answer the question as to whether I consider the employment of children in cotton mills for unlimited hours an abuse calling for legislative action in the negative. Anything approaching "sweating" such as prevails in Europe is an unknown factor in India, and considering the wholly different physical, social, religious, and domestic conditions which prevail in this country, I do not consider any abuse actually arises from a state of affairs which form part of the customs and habits of the people of this country.

6. In spite of this however, I see no objection to the introduction of the "young persons" under 18 years of age whose hours of working will be limited to 13 a day, provided such rule is applied to all spinning and weaving mills in India. I am informed that under the English Factory Act the only effect of the introduction of the "young person" is that male operatives under 18 can only work the maximum hours and, like women, cannot work overtime. The indirect effect of legislation introducing the "young person" would probably be to make his hours of labour the maximum for all textile manufacturers.

7. I am of opinion that raising the age of full-timers from 14 to 16 would certainly affect the quality and supply of labour, and in many cases, be a real hardship on those operatives affected by the change.

8. I see no particular objection to raising the age of half-timers from 9 to 10 years, though I doubt if any advantage, physical or otherwise, would accrue to the parties concerned.

Yours sincerely,
(Signed) A. LESLIE.

Oral evidence.

Witness stated that he had been connected with the mill industry in Bombay for eighteen years. They had electric light in all their mills, which worked from dawn to dark, the longest day worked being 13 hours 22 minutes, excluding the half-hour interval. Witness thought it extremely difficult to compare the output *per* hour of the long and short working days The machines altered their counts, and there was no proper basis to go upon. Economically, the owners preferred the longer day, because the cost of production of the long day was less than that of the short day. Witness did not think the operatives would agree to an average day, working say 12 hours all the year round. They had once tried a 13-hour day in their mills. This was all right in the hot weather, but when the short days came round, the operatives refused to make up the 13 hours by working by artificial light. Witness agreed that the continuation of the very long hours worked in certain mills in 1905 was a physical impossibility. In his opinion the creation of a class of "young persons" would, in certain cases, have the effect of restricting the working hours, but in those mills where "young persons" were not largely employed, they would have to go. An average working day meant frequent difficulties with the men, who were accustomed to working from daylight to dark, and would resent any change. The men liked to go home when the sun set, and would not make up the average day in the cold weather. If there was another boom in the industry, witness did not anticipate that the long hours of 1905 would again occur. In his opinion the conditions that gave rise to those hours were purely exceptional, the mill-owners expecting to cheapen the cost of production by so working. Witness was opposed to an average working day which, he said, the mill hands would not understand They could not reduce the hours in the long days and prolong them in the cold days, except by extra payment. He paid the same monthly wages all the year round, but the majority of the men were on piece work. Working under daylight conditions witness considered that the difference in the output of yarn *per* hour in the long and short working days would only be a mere fraction, and not worth taking into account. Witness thought that a maximum of 13 working hours by daylight should in any case be allowed. The hands always took their own time off, and were absolutely independent. The operatives gained their points, although they had no definite and recognised organisation. Witness could not go into the question of comparative production *per* year of English and Indian operatives, but so far as spinning was concerned, he had practically stated in his written evidence that one Englishman could do as much as two Indians. He could not go into the question as to how their wages compared. The English might receive five times as much money for doing twice as much work, but then the conditions of life prevented a real comparision being made. In his opinion the operatives generally kept to one mill. If their hours were restricted, he did not think they would change their habits in the least degree. Eighteen months was, he thought, probably the maximum that a mill-hand stayed in Bombay. The inference to be drawn from that observation was that mill operatives formed a floating population. They worked a little while, made some money, and then preferred to go away on leave. There was the possibility that the operative was tired out and required rest, but he did not think that was the reason. Witness was at the mills every morning. They had a dispensary, and he had not observed much sickness. He had not observed many young adults who ought not to have been passed. On one occasion he picked out two boys who appeared to him to be under 14, but two doctors who were present stated the children were well over that age. In regard to ventilation the operatives preferred to keep the windows closed, and witness did not think that a standard of purity of air could be enforced. Under the English Act of 1889, with a dry bulb temperature of 100° F, a maximum humidity of 64 % appears to be allowed. Then in Bombay we seem to have 95 % natural humidity during the rains at times. The only person who objected to open the windows was the operative. So far as his observations went, he thought that the operatives had not improved in skill as a class, the improvement, if any, was very slight. The mill operative was a casual worker. The class was always changing and did not reside permanently in Bombay. There were no really old men in the mills. They did not end their days there, but retired to their villages. Even if the adult day were restricted to 12 hours, his remark in his written evidence about the "young person" class would still apply. His evidence was based upon the experience derived from working day-light to dark hours. He had no experience of other conditions. He had no objection to a half-timer working on the night shift, provided his hours of labour were not extended. He was satisfied generally with the present Act, which required no change whatever. He disapproved of owners being compelled to provide schools. If mill children were to be educated, then other children ought to be educated, and thus it become a State affair. They would also have to make the attendance of children compulsory. The present restriction of the hours of women prevented them from working on frames, but he did not think they were competent to work side by side with men. He saw no great advantage in raising their hours to 12.

Witness No. 38.

Mr. H. R. Greaves, Bombay.

Mr. Greaves.
Written evidence.

I am a partner in the firm of Greaves, Cotton and Company, who are the owners of the Apollo Mills, and agents for the under-mentioned companies employing the number of hands noted:—

Mill.	Spindles.	Mill-hands.	Reelers.	Total.
Apollo	45,232	50	562	1,412
New Empres ...	41,824	986	626	1,612
Howard and Bullough ...	43,824	948	685	1,633
Connaught	32,760	815	442	1,257
Empress	34,680	590	410	1,000
James Greaves ...	38,124	602	498	1,100
Imperial	38,016	584	450	1,034
Leopold	15,664	430	256	686
Total ...	290,124	5,805	3,929	9,734

I find that the average working days during the past ten years have been 311 days *per* year and each working day has averaged 12 hours and 9 minutes. Prior to putting in the electric light we worked from day light to dark, as customary with Bombay mills; the days averaged 12 hours 9 minutes all the year round. In 1905 we put the electric light in our mills and worked at first until 7-30 P.M.; later on we curtailed the hours to 6-30 in the short days. We found the hands objected to work longer hours and had to stop earlier to meet their objections. The working hours of adult males should not be limited, and the physique of workers has not been effected by long hours. I think the engines should be stopped for half an hour between 12 and 2. I don't know of any illegal employment of adults between the ages of 12 and 14; consequently do not think a special class of workers corresponding to "young persons" under the English Act is called for or necessary. I think the employment of women at night should be prohibited in spinning and weaving mills, but not in ginning factories. Workers in ginning factories are quite different in all conditions to workers in spinning and weaving mills. Labour in ginning factories should not be interfered with. I don't think it is necessary to raise the limit of age of children from 9 to 10, or beyond 9—and I do not think certificates of physical fitness at all necessary before children of 9 years of age or upwards are allowed to work in factories. No mill-owner would allow a sick child to be engaged—for the simple reason that it would not pay him, and it must not be overlooked that a child of 9 in this country is, as a rule, a very intelligent person and quite capable of looking after himself (and is a better worker than he is at 14). I don't think it is necessary, or should be incumbent on mill-owners, that half-timers should have a certificate of age and physical fitness before they are allowed to work full-time. I do not think it should be prescribed by law that children should not be employed except in regular sets, whether morning-and-afternoon sets or double sets. No factory owners should be forced to provide elementary education for children—my firm tried it for some years and had to give it up. As a matter of fact, the children would not attend—they or their parents found other work for them. We were the first to introduce ring spinning into India and it is chiefly in ring mills that children are employed, and we know they went to other mills to work. It is not practicable to prevent children accompanying workers (*i.e.*, their parents), to any part of the factories. I don't think any legislation is required to prescribe a standard of purity of air of Indian mills. Owners themselves are only too anxious to obtain this desired state of affairs, and my firm is now installing a system at a cost of more than £1,000 as an experiment to see if we can get the desired effect. I do not think a standard of moisture for air in factories is necessary in this country—our climatic conditions are so different to any other country we know of: and with a dry heat of 110 in the shade outside the mill and a dry wind blowing, who can say what should be the standard of moisture inside the mill? I quite agree with a standard of purity of water for humidifying purposes, but what municipality in India can give it? Even our Malabar Hill water is often objected to by users, and who is to determine what the standard of purity shall be? Latrine accommodation is a detail that can be left to the municipal authorities to settle. I am in favour of ample accommodation being compulsory, and also that all doors should be hung so as to open outwards readily in case of fire, and for everything that is conducive to the safety of the operatives. I think we are hampered with quite enough legislation regarding fencing of machinery, and no further precautions are necessary. Mill-owners themselves are only too anxious to protect all dangerous parts, and should not be compelled to fence off parts at the whim of inspectors. Uniformity in the administration of the Factory Act throughout India is desirable. Full-time inspectors are not required.

Mr. Greaves.

Witness stated that all the mills in which he was interested were spinning mills, and electric light was used for a few minutes at the close of the day. In 1905 his mills ran up to half past seven at night. The total output *per* day was large, but the production *per* spindle *per* hour was practically the same as in the short days. He did not pay extra wages to the men after dark, and that was the main reason why the men would not work now by the aid of electric light. His mills worked practically a steady day of 12 hours 20 minutes all the year round. Witness thought it unnecessary to interfere with the law affecting children, and did not agree with the physical fitness certificate. At present the child pleased himself whether he worked or not. He had had experience of ginning factories in Broach and Palej. These, unlike those in Khandesh, did not come under the Act. When it was a busy season the gins worked for 17 or 18 hours a day, but the hands came and went as they liked, and did not work all the time. These conditions existed only for two months in the year. The season was from February to April sometimes going on to May. The labour was supplied by the villagers who cultivated their farms during the remainder of the year. During the busy season the women assisted in the work, and so added to their income. Witness considered that bringing the Gujarat gins under the Act would affect the supply of labour very much, and if they sought to restrict the working hours, than a very large force of inspectors would be required. Personally he had a capable Parsi agent in charge of his gins, who would be able to see that the Act was carried out, but other owners, who resided in Bombay, were not so situated. The machinery in his ginning factories was underdriven, the line shaft being on the floor, and well fenced, and there could be no danger at all. Openers were not required in Gujarat as the Broach cotton was clean and went straight into the gin when brought from the field. Openers were confined chiefly to Khandesh, were the cotton crop was dirty. There was no reason to fear accidents or fire from the opener, unless some hard substance got in. His manager, Mr. Dinjishaw Dinshaw, would be in Bombay shortly, and could give evidence, if necessary. Witness would like that anything he had said on the subject of gins should be taken as subject to correction by Mr. Dinshaw. Witness considered that the Bombay mill operatives as a class had improved in skill. His experience covered 27 years, and not only had there been a general improvement in their work, but also they applied themselves more steadily now. At the same time there had been a great improvement in the machinery which might have added to the apparent improvement in the skill of the labourer. They could not compare the relative value of Lancashire and Indian mill-hands, and he anticipated labour troubles if they attempted to restrict the liberty of the Indian operatives, who were still as casual as when he first knew them. Owing to the idling habit he was obliged to employ from 30 to 40 *per cent.* more hands than would ordinarily be required for mill purposes. The hands were absolutely independent. A fixed 12 hours'

Oral evidence.

r. Greaves.

day would force electric light into every mill, and those mills which had not at present electric light would be penalised to the extent of £2,000. Such a restriction would injuriously affect the mill-owners. Witness did not consider that many under age children were passed as over-age, but there might be a few cases where they were given the benefit of the doubt. They had it on record that a Bombay doctor once rejected a woman as below age, and then passed her daughter as above age! The presence of a few unfit children might not be noticed from the point of view of output of work, but if they became a material factor, then their presence would be felt. It was not to the interest of the owners to employ such children.

Witness saw very grave difficulties in any fixed standard of ventilation. The native objected to draughts, and so any ventilation must be automatic and mechanical. He was trying an experiment at present, and the expenditure referred to in his written evidence also included the money that was being spent on humidifying. They could not put in an installation which would be ventilating only. If his experiment was a success, then he thought that the bulk of the Bombay mill-owners would follow his example. The mill in which this installations had been placed was quite cool, as a result, but the arrangements were not yet complete. It was easy to distinguish between the atmospheres of good and ill-ventilated mills by the senses, but in this experiment he was relying on a regulator showing accurately the differences in temperature and humidity. He expected the installation to be finished by the end of the month. Witness used municipal water for humidifying purposes. It was desirable to have as pure water as possible, and it certainly should not be taken from the condenser tanks. Fifteen to twenty years ago the children undoubtedly went from one mill to another to work, and to stop this witness introduced schools, but the children would not attend. The evil in those days arose out of the scarcity of child-labour consequent on the improvements of machinery which made child-labour possible. Child-labour was now plentiful, and the evil was not so great as 15 years ago. He objected to half-timers working in sets, because he preferred not to have a boy who had worked elsewhere. The proposed class of "young persons" would determine the working hours of the mill. From his observations he asserted that the mill operatives as a class had not suffered in physique, and there were hundreds who had worked for years in the industry. They took their holidays, and generally returned to the same mill. He should not say that the majority were in debt, and their absences were not due to illness. He considered it objectionable to employ women at night, but it was necessary to do so in ginning factories, where they had a limited time during which to prepare the produce for the market. If men were solely employed in the gins, then their lands would have to remain uncultivated. It was absolutely essential that women should be allowed to work in gins at night.

Witness No. 39.

Mr. Manmohandas Ramji, Bombay.

r. Manmohandas Ramji. *Written evidence.*

I represent two mills, the Indian Manufacturing Company, Limited, and the New Kaiser-i-Hind Spinning and Manufacturing Company, Limited. There are employed in all 1,196 workmen, consisting of 1,044 men and 152 women, in the former mill, and 1,181 workmen in all, consisting of 930 men, 194 women and 57 children (or half-timers), in the latter mill. I give below a statement for 10 years showing the number of days each of these two mills worked longer than 12½ hours, in each year, also the average daily number of hours worked for each year, during that period:—

Year.	The Indian Manufacturing Company, Limited		New Kaiser-i-Hind Mill.	
	Number of days working more than 12½ hours.	Average daily number of hours working in each year.	Number of days working more than 12½ hours.	Average daily number of hours working in each year.
	Days.	Hours.	Days.	Hours.
1897	88	10 20	17	11 48
1898 ...	106	11·36	57	12·37
1899	106	11·52	65	12 6
1900	*Nil.*	11·21	65	9·54
1901	102	11·57	91	11 55
1902	100	11·55	49	11·41
1903	101	11 57	79	11·47
1904	100	11·56	105	12·9
1905	101	12·57	97	12 14
1906	115	12·3	132	12·11

The following statistics show the effect on production of working the longest and the shortest hours, for each of the two mills for 20*s.* yarn (similar information for no. 10*s.* and waste is not available for both mills):— Mr. Manmohandas Ramji.

Year.	Indian Mill.				Kaiser-i-Hind Mill.			
	Production *per* ring spindle of 20*s.*				Production *per* ring spindle of 20*s.*			
	Longest days.		Shortest days.		Longest days.		Shortest days.	
	Hours.	Oz.	Hours.	Oz.	Hours.		Hours.	Oz.
1897 ...	12·39	4 93	8·23	3·98	Not available.			
1898 ...	12·46	5·15	10·52	4 58				
1897 ...	12·46	5·12	11·2	4·59				
1900 ...	Closed.	Closed.	10·55	4·52				
1901 ...	12 49	5·31	11·11	4 74	12·49	3·89	11·55	3·85
1902 ...	12·50	5·63	11·15	4·86	12·47	4 56	11·41	4·24
1903 ...	12·45	5·29	11·13	4·98	12·50	5·06	11 47	4·99
1904 ...	12·45	5 66	11·14	5·09	12·57	6·07	12·9	5·82
1905 ...	12·51	5·63	11·13	5·02	12·55	7 19	12 14	6 58
1906 ...	12·48	5·39	11·8	5·15	12·49	6 84	12·11	6·57

It is absolutely necessary in my opinion to allow children, on half time, to work in a mill prior to undergoing examination for certificates of physical fitness as well as of age. Should the production of such certificates be rendered compulsory, at least a month's time for the purpose will be sufficient, with a view to avoid abuse of the concession given. Should the law insist on securing the medical examination of half-timers with reasonable despatch, I think the present arrangement is sufficient. Assuming that a half-timer is required to procure a certificate of physical fitness to work as an adult on full time, I think the thumb mark of the employé on the last given certificate will be ample identification of any half-timer examined and rejected as physically unfit for full time. I am not in favour of the creation of a class of "young persons." These persons are necessarily required, and the want of them will eventually result in the closing of a mill. The hours of adult labour should be restricted between the hours of 6 A.M. and 6-30 P.M., including half an hour recess between 9 and 10 A.M. to take food, and half an hour between 2 and 3 P.M. for either food or rest, as some of the labourers take food in the morning, while others take it in the afternoon. I do not approve of the suggestion to fix a maximum number of hours, and to leave it to the discretion of individual employers to settle the time for the commencement and termination of the day's work.

Oral evidence.

Witness stated that he had been connected with the industry for 27 years. He had no electric light in his mill. The production was, if anything, better in the longer days than in the short days. December and January were the end of the season when they had the last pick of cotton, and consequently a lower quality. The new cotton came on during the longer days, and naturally there was an improvement in production. He had disapproved of the very long hours from the outset. It was in 1891 that owners commenced to work by electric light, and in some mills the men worked by shifts up to 12 o'clock at night. The Collector of Bombay asked for information about the long hours, and the question was discussed at a mill-owners' meeting presided over by Sir George Cotton, when it was resolved to tell the Collector that very few mills were working these long hours, and there was nothing worth consideration. Then followed a time of depression, and long hours were at an end until 1905. He was of opinion that such hours adversely affected the health of the operatives. He considered that 30 *per cent.* of the operatives were migratory. They would borrow more than their month's wages at one mill, and then leave for another mill. The jobber usually stood as the guarantor, and had to bear the loss. He thought 11 hours, excluding the recess time, a fair working day. At present the men could not stand the strain of the long hours, and so absented themselves, with the result that owners had to engage more hands than were necessary for the ordinary running of the mill. He himself did not engage extra hands. A few substitutes were occasionally required, but generally they regulated the working of the mill by calling on departments which had full complements of hands. As a class mill-hands had improved in skill, but not in application; he thought that with a fixed 11 or 12 hours' day the owners could be stricter than at present. At present the men were overworked, they wanted rest, and so they absented themselves. His mill-hands did not absent themselves to any great extent. They took one or two holidays a month, and out of the 26 working days in a month the majority put in 24 or 25 days. A fixed 12 hours' day would not injure or dislocate any trade in India. Until the operatives were educated there must be some restriction to preserve them as a class of workers. They were tempted by the hope of getting more money to work long hours, and so injured their health. If the hours were restricted, he thought that the operatives would work harder in order to earn more money. Out

, Manmohandas Ramji.

of 1,181 hands in his mill he considered that only about 30 to 40 were absent every day. He never had a deficiency of labour, but sometimes a few hands left for those mills where long hours were worked. These long hours only existed in the spinning mills, not in the weaving mills, as the hands could not work so well with electric light in the latter. The creation of a class of "young persons" was an indirect way of closing the mills after a reasonably long day. He would do the direct thing, and restrict the hours of adult labour. In his opinion the creation of a "young persons'" class would not affect a weaving mill, but if it affected one, it would affect all. Witness would like two intervals for meals, but would not increase the length of the mid-day rest, otherwise they would go home and not return to work again that day. At present the hands took their meals and then wasted half an hour, while after the mid-day rest they would enter the mill and go to sleep as though exhausted. In his opinion all the money they earned went to the grain dealers, and in sweetmeats and drink, and less than 10 *per cent.* of them saved money. Very few sent money to their country, but the elderly people no doubt retired to their lands where they lived with the assistance of their children. They incurred heavy debts at the time of their marriage, and obtained then the ornaments which they wore on their persons. A clerk in his employ earning Rs. 20 a month on his betrothal borrowed Rs. 400 from outside, and also asked witness to advance him another Rs. 400. This was an example of how they became indebted. He had no objection to the owners fixing their own working day if they gave proper and sufficient notice to the inspector. He would, however, prefer a definite fixed period, which would save bother between owners and inspectors, and prevent evasion of the law. In his opinion the work-people were so illiterate and ignorant that they did not understand the advantage or the disadvantage of short and long hours. Their one idea was to earn the highest wages. Witness had not raised his rates for piece-work on account of the introduction in other mills of the electric light. In his opinion as time went on they would find that shorter hours meant a better and larger production. The men were under the control of the jobbers, who were the masters of the situation.

Witness No. 40.

, F. C. Ibrahim. *itten evidence.*

Mr. Fazulbhoy Currimbhoy Ibrahim, Vice-Chairman of the Bombay Millowners' Association.

I represent the Currimbhoy Mills, the Ebrahimbhoy Pabaney Mills, the Crescent Mills, and the Fazulbhoy Mills, where the number of men, women and children employed is as given in the accompanying statistics. The accompanying statement will also show for how many days in each year, during the last ten years, the mill has worked over 12½ hours a day, and also the average daily number of hours for each year during the same period. Certificates of physical fitness as well as of age should be required before children are employed on half-time, and I think a week is a reasonable time-limit within which the employé should be allowed to work pending examination for a certificate. This certificate should be necessary only in the case of children, and adults should require none. I do not think it is necessary to call for fresh certificates of physical fitness in the case of half timers, who become adults on attaining the age of 14 In practice it will not work well if certificates are enforced, since it is open to the half-timer to serve in other mills, in order to avoid obtaining a fresh certificate. I am not in favour of the suggestion for the creation of a class of "young persons." I believe it will not be practicable, and will only give rise to further confusion. The hours of work in a factory may be arranged, as best suits individual employers, between 5 in the morning and 8 in the evening. No factory should begin work before 5 or run on after 8. I do not believe there is any necessity to get our inspectors from the United Kingdom; the men we get locally are sufficiently intelligent for all practical purposes. On principle I am against any limitation by law of the working hours of adult males. Generally the actual working hours at present are 13, but about 15 *per cent.* of the workmen are at all times found outside the mills, thus reducing their actual working hours from 13 to 11½. If twelve hours *per* day be enforced by law, the result would be a reduction in production, since the men will never give up their habit of resting, or loitering about the compound, thus reducing a 12 hours' day to one of 10⅔ hours. At the same time I feel constrained to say that when workmen are compelled to work for more than 12 hours, it does tell upon their health, and they soon deteriorate. It is not necessary to have a special register of all workers under the age of 16. It is my opinion that no female should be allowed to work after 6 P. M. The employment of women at night must be prohibited. There is no need to raise the minimum age at which children are allowed to work in factories. The present minimum of 9 years is quite adequate. Still, if the Commission consider it necessary, the age might be increased to 10. Before children are allowed to work in factories certificates of age as well as of physical fitness must be required. It will, however, not be necessary to insist upon a fresh certificate before a half-timer is allowed to work full time. The certificate that he has obtained at the time of his first examination should be a sufficient guide for all future occasions. I am in favour of a law prescribing that children should only be employed in regular sets—one set for the morning and another for the afternoon. It is not desirable to burden the factory owners with the responsibility of providing elementary education for children working in their factories. To my mind this is more the duty of the municipality and the Government than of the factory owners. Generally non-working young children are not allowed into the factory, unless it be that they bring the meals of the employés. The points relative to sanitation, ventilation, etc., may best be referred to a committee of experts in sanitary matters. There is no need to prescribe that all doors of working rooms should be hung so as to open readily from the inside outwards in case of fire. A sufficient number of doors is always open during work time to offer easy exits in case of any emergency. It is likewise needless to insist upon any further precautions for fencing machinery, as those already enforced by the Act are quite adequate for the purpose. It is quite essential that arrangements should be made to secure uniformity in the administration of the Factory Act throughout India, including Native States. It will certainly be preferable if full-time medical inspectors of factories are appointed to assist the present inspectors in securing the

due observance of the Act. Finally, I take the liberty to suggest to the Commission the important question of the housing of the mill-hands—a question on which the health and well-being of the employés so vitally depend. The need for this is very great and the question deserves the most serious attention of everyone concerned. There is no doubt that the health of the employés suffers considerably owing to their most unhealthy surroundings; and it has been proved by experience that the men keep better health when living in the vicinity of their mills than those who live in the unhealtby parts of the city. Mr. F. C. Ibrahim.

The Currimbhoy Mills Company, Limited.

Average daily attendance of hands in the Currimbhoy and the Mahomedbhoy Mills:—

Men	...	1,573
Women	...	757
Children	...	11
		2,341

Years.	Working days over 12½ hours.	Average number of hours the mill worked.
1897 ...	102	12·2
1898 ...	111	11·58
1899 ...	150	12·20
1900 ...	105	11 24
1901 ...	264	13·19
1902 ...	279	13·19
1903 ...	284	13 20
1904 ...	269	13·19
1905 ...	215	12·40
1906 ...	286	12·54

Working day of	Production *per* spindle *per* hour of 10s, ring.	Production of reeling yarn *per* spindle *per* hour of mule, 20s.	Period covered by these statistics.
12 hours ...	1·066	0·417	1905
13 „ ...	1·085	0·443	1907
14 „ ...	1·093	.....	1905

The Ebrahimbhoy Pabaney Mills Company, Limited.

Average daily attendance of hands in the Ebrahimbhoy Pabaney Mills:—

Men ...	...	982
Women ...	...	566
Children	...	45
		1,593

Years.	Working days over 12½ hours	Average number of hours the mill worked.
1898 ...	117	12·1
1899 ...	113	11·59
1900 ...	78	11·22
1901 ...	100	11·55
1902 ...	113	11·59
1903 ...	187	12·27
1904 ...	275	13 27
1905 ...	214	13·2
1906 ...	287	12·55

The Crescent Mills Company, Limited.

Average daily attendance of hands in the Crescent Mills:—

Men ...	...	1,533
Women	...	239
Children	...	7
		1,799

Years.	Working days over 12½ hours.	Average number of hours the mill worked.
1901-02 ...	117	12·0
1902-03 ...	251	13·0
1903-04 ...	262	13·30
1904-05 ...	282	13·35
1905-06 ...	234	13 0
1906-07 ...	276	12 45

Mr. F. C. Ibrahim. *Oral evidence.*

Witness stated that the maximum number of hours worked in his mills was 14 in 1905. He considered that a 13 hours' day was fair to masters and men, that was to say, 12½ hours of actual work. He had, however, no objection to legislation for a 12 hours' day of actual machine running. In his opinion the present day of 13 hours was the limit, because the men themselves had agreed to that time, and for some months previous the hours' question had been gradually adjusting itself. He believed that the creation of a class of "young persons" would cause great confusion, and disorganise labour. The hours they worked would determine the working hours of the mill, for in his opinion about 50 *per cent.* of workers were young adults. If there were to be any restriction at all, he would rather it applied to adults. Witness objected to the physical examination certificate at 14, but would make that at 9 years a very strict one. It was his experience that the men worked steadily in the evening, and did not leave the mill, and so the production increased. He did not find that the men were exhausted after their day's work. He had tried a 12 hours' day in the hope of obtaining better production and greater application from the men. He was disappointed, however, and the men themselves wanted the same wages that were paid for the longer day. The majority of hands were on piece-work, but those on monthly wages also received extra pay for the hours worked by electric light. In the course of 10 years witness had seen an improvement in the skill of the work-people, but they were not more industrious. In the housing problem mill-owners wanted the assistance of Government, and the Bombay Improvement Trust. It was not right that the mill-owners should bear the whole of the burden. The industry had only been prosperous for two years. Now India was losing the China market. Japan was driving Indian yarn out of the China markets, and the industry in Japan received imperial assistance. In India they could not get sufficient labour for two shifts. Mill-owners ought not to be asked to provide the capital for *chawls* for their workers. The export of Indian yarn to Japan was now *nil*, while formerly it was two hundred thousand bales. At present houses for the operatives were provided by private enterprise, and the old *chawls* returned from 8 to 10 *per cent.* without allowing for depreciation. New *chawls* would not return more than 2½ to 3 *per cent.* owing to the value of the ground and the dearness of labour and building materials. He suggested that the Improvement Trust should borrow the money at 4½ *per cent.* and build the *chawls*, and as the Trust did not expect to get more than 2½ *per cent* in return, the mill-owners would meet the loss on the interest. Mill-owners could not become philanthropists at the expense of their shareholders, and build *chawls* for a 3 *per cent.* return when they could obtain 25 *per cent.* in other directions. The operatives, moreover, would not live in *chawls* close to the mill. By a 12 hours' day witness meant 12 hours of actual work, and it was possible they would come to this in time without legislation. The mill-owners were not united on this point, and therefore they had to accept legislation, but he strongly objected in principle to adult labour being restricted. He still considered that the suggestions in the report of Sir Hamilton Freer-Smith's Committee were "independent, sound and practicable." Japan had dumped yarn in China at a loss to her merchants, but with the assistance of Government, in order to compete with India, and any legislation which would increase the cost of production in India would further lessen India's hold on the China market.

Witness No. 41.

Mr. Moore, of the New Mofussil Company, Limited, Bombay.

Mr. Moore. *Written evidence.*

The New Mofussil Company, Limited, have 17 ginning factories and 16 press factories. Roughly, about 50 to 60 men, and 10 to 20 women only, are employed in press factories. In ginning factories of 40 gins about 50 men and 50 to 60 women are employed. No children are employed. The approximate working seasons are as follows:—

Gujrat.—January to April.
Berar, Khandesh and the Central Provinces.—November to April.
The Punjab and the United Provinces.—October to March.

For the last month or 6 weeks the work is intermittent, and depends on the size of the crop. The usual working hours are from 5 A. M. to 6 P. M. In Berar, Khandesh, the Central Provinces, the United Provinces and the Punjab, men work for about 11 hours, and women for about 9 hours. In Gujrat the hours are longer. There are no regular intervals. I approve the proposal to bring gins and presses under the Act, irrespective of the length of their season, provided this is equally applicable to all factories, including factories in Native States, and that the Act is for the purpose principally of regulating the ventilation, sanitation and protection of machinery. There should be no restriction imposed limiting the hours of labour. Women should be allowed to work at night, provided a woman does not work for more than 9 hours in 24 hours. The feeding of gins is not tiring work for a woman. It only requires a little care, and the women very often relieve each other at odd hours of the day. I do not consider any change in the present Act is necessary. I would suggest, however, that more highly paid and experienced officers be appointed for the work of inspecting factories, as under the present system factory owners are very often put to unnecessary inconvenience and expense on account of orders given, especially when a change of inspectors is made. The necessity of fencing the line shaft depends on the style of the ginning factory. Women should not be prohibited from working in front of the opener. Accidents should be avoided by having the cotton opened by hand before it passes through the opener, which is generally done in our factories. There have been no serious accidents in any of our presses or gins for the last five years. I would like to bring to the notice of the Commission that pressing and ginning factories are only worked for a short time during the year, and it is imperative to get the cotton ginned and pressed immediately; this being the case, if any restrictions were put on the hours of work, the trade would suffer, and as the work-people, who are principally agriculturists, add to their earnings by working a little harder during this short period, it would be a hardship on them, especially as it does not seem to have any ill effect on their health. Further, any restriction of this kind would be a serious tax and inconvenience to the trade, as labour in the districts is scarce and difficult to obtain.

Witness stated that at Broach they worked night and day during the season at the gins in order to feed the presses for the day work. They generally tried to arrange shifts for the gins, if the hours were really long, but he saw no harm in allowing them to work for 16 hours. His gins had worked from 5 A. M. to 1 A. M., but not with the same hands, he thought. The hands themselves had a system of shifts. The pay was from 3 to 5 annas for a woman and from 6 to 12 annas for a man. Lately there was great difficulty in getting labour at Broach, and so they had to pay high wages. All the factories managed by him, with the exception of those in Gujrat, were under the Act. He approved of the Act being applied to all factories, big and small, provided it was also applied to those in Native States, and was for the purpose of regulating machinery and sanitation, but not labour. Ginning and pressing formed a class of work by itself. It started slowly, and then there came a rush during which time the cotton had to be ginned and pressed. The hands were paid daily, and not at the end of the season. He had no accidents with his openers in Khandesh and Berar. Witness had no personal experience acquired by the actual managing of a ginning factory. He had only managed the factories from Bombay. The cotton had to be ginned and pressed as quickly as possible, otherwise it deteriorated if left in the open. He did not consider that it would be more economical to build warehouses where the cotton could be stored preparatory to use. He considered that the 9 hours' work which the women actually did a day was not too great a strain on their health. He objected to any legislative interference with the hours of adult labour in gins and presses. *Oral evidence.*

WITNESS No. 42.

Mr. S. Meyers, mill manager, Bombay.

The mills I represent are the David Mills Nos. 1 and 2, and the Standard Mill. The number of men, women and children employed in the above mills is as follows :— Mr. Meyers. *Written evidence.*

	Men.	Women.	Children.
David Mill No. 1	811	450	38
Do. No. 2	857	576	42
Standard Mill	1,707	231	*Nil*

The above mills have worked the following number of days over 12½ hours during the last 10 years :—

Years.	David Mill No. 1.		David Mill, No. 2		Standard Mill.	
	Number of days.	Average hours daily.	Number of days.	Average hours daily.	Number of days.	Average hours daily.
		H. m.		H. m.		H. m.
1907	267	13 0	267	13 0	267	13 0
1906	311	13 0	311	13 0	311	13 0
1905	311	13 20	311	13 45	311	13 20
1904	312	13 30	312	12 17	312	13 30
1903	312	13 12	312	11 55	312	13 12
1902	309	13 45	309	12 26	309	13 45
1901	306	13 18	306	11 43	306	13 18
1900	280	11 46	280	11 38	280	11 46
1899	299	13 11	180	12 46	299	13 11
1898	309	13 29	—	...	309	13 29

The working hours of adults should not be limited, and from personal observation during the last 20 years I do not find the physique of the adult workers affected in any way. I am not aware of any illegal employment or of its effects on young persons between the ages of 12 and 14, but I of opinion that it is desirable to create a special class of young persons, *i.e.*, intermediate between half-timers and adults, their hours of labour being restricted to 12½ hours, exclusive of the half hour stoppage in the middle of day. The employment of women at night should be prohibited. I think the minimum age for children to work as half-timers should be raised from 9 to 10 years. It is necessary to have both age and physical fitness certificates before employing any child in a factory. Before children (who have hitherto worked half-time) are allowed to work full-time it is necessary to have them certified both for age and physical fitness. No child should be made to work in double sets, and a law should be prescribed to work children only in regular sets, morning and afternoon. Factory owners should not be called upon to provide elementary education for children working in their factories. A rule should be made prohibiting young children accompanying workers to dangerous and unhealthy parts of factories. This rule can be enforced by efficient inspection and prosecution. Ventilation ought

Mr. Meyers.

to be enforced, within prescribed limits, by means of ventilating fans and other artificial means, without any structural alterations. All the mills I represent are ventilated by means of exhaust fans extracting foul air and admitting fresh air through air ducts. It is difficult to prescribe a standard of moisture for air in factories during the monsoon months. For the dry months of the year a similar standard of moisture to Lancashire mills should be prescribed. All water used for humidifying purposes should be pure, and a standard of purity should be fixed. The standard for latrine accommodation should not be raised but separate urinal accommodation must be insisted upon. All doors of working rooms should be made to hang in such a manner as to open readily from the inside outwards, with the exception of fire-proof doors for insurance purposes. Uniformity in the administration of the Factory Act should be arranged throughout India. Full-time certifying surgeons should be appointed to assist the present inspectors in securing the due observance of the Act. I cannot supply any statistics showing the effect of working days of varying length (*a*) on the production *per* spindle, (*b*) on waste and (*c*) on the economical working of a factory. Certificates of physical fitness as well as of age should be required prior to the employment of children as half timers, and again before their employment as full-timers. No child should be employed without first getting a certificate of age and physical fitness, and no time limit should be given, in order that no loophole may be given for illegal employment of any child for a single day. In order to secure medical examination of half-timers Government should appoint a full-time certifying surgeon who will be paid by Government, and no fees should be levied by the certifying surgeon from the factory owners. Certifying surgeon should visit each and every mill in his district once a week. Assuming that the recommendation with regard to the age and physical fitness certificate for half-timers before working as adults is accepted in principle, it could not be applied in practice. The only safeguard against any half-timer being passed as an adult in another factory, after having been refused a certificate in the factory in which he first worked, would be efficient examination on the part of the certifying surgeon as to his physical fitness. It is desirable to create a class of young persons, and their ages should be limited from 14 to 17 years, and they should be restricted to 12½ hours' actual work. This will result in automatically reducing the hours of labour for all the employés of cotton spinning mills to 12½ hours of work, as it will be impossible to work any cotton spinning mill without the help of young persons, who are employed as doffer boys and piecers in the various preparing and spinning processes. There are about 35 *per cent* of young persons between the age of 14 and 17 working in the various departments of the above mills at present. The legal working hours should be restricted from 6 A.M. to 7 P.M. with one stoppage of half hour in the middle of the day from 1 to 1-30 P.M. It should not be left to the discretion of each individual employer to fix the commencement and the termination of the day's work. I am of opinion that cotton spinning should receive special treatment in respect of hours of labour for the following reasons :—

> The mill-hands, although they work 13 hours at present, have every latitude for working as they like without any restrictions. From observations taken during the last 20 years, I find that no employé works more than two hours at a stretch. They go out in the mill compound when they like for smoking, drinking and natural purposes, and stop out from 15 to 30 minutes at a time. The doffer boys in all the departments of the mill, also the piecers in the ring and mule departments, as a rule go out after every doffing, which means on an average every 1½ hours. Besides they take their meals during the working hours inside the mill, but never during the half hour stoppage. All the mill-hands stop away from work whenever they feel inclined to do so without asking leave.

It is not at all advisable to obtain inspectors for factory work in India from England. I do not consider there is any necessity for factory inspectors to receive training in England. I may suggest that it is not expedient to introduce a rigid Factory Act in India similar to the one in operation in Lancashire, where the work-people are of steady and regular habits, as the operatives here are of very irregular habits, and abstain from work for lengthy periods, and visit their native villages at odd times during the year to perform their various religious and other ceremonies. I am of opinion that the hours of work for women should not be restricted. They attend work at any hour in the morning, between 7 and 9 A.M., owing to their domestic duties, and leave in the evening from 6 to 6-30 P.M. The 1½ hours' midday stoppage now in force is a great hardship on these poor people as they barely work 8½ hours a day, and are thus prevented from earning better wages. No woman is prevented from going home at any time during the day for nursing her infant. In case any factory attempts to prevent them they avoid work in such factory. The labour market for mill hands in Bombay is always short ; therefore several mills try to evade the Factory Act. It is a well-known fact that in several mills in Bombay the women (reelers) are called upon to work every Sunday, and also during the 1½ hours' interval in the middle of the day, on account of the insufficiency of this class of labour. The physique of the women working in cotton mills is exceptionally good, and far better than that of the men. Therefore, I suggest that the 1½ hours' stoppage should not be enforced. If this suggestion is carried out, I feel confident that it will not in the least affect the physique of the women, as even then the actual working hours of a woman, working from 7 A.M., to 6. P.M., will only be 10½ hours and not even the 11 hours allowed by the Factory Act at present.

Oral evidence.

Witness stated that his Company had electric light in all their mills, and they began working fairly long hours in 1902. In his opinion there was greater efficiency in the shorter days, but the longer hours were more profitable for the owners, the working of the mill being more economical and the cost of production not so great. The quantity of stores issued for 12 and 13 hours would do for 14 hours. If hours were to be restricted, he preferred the creation of a class of "young persons," which would affect weaving as much as spinning. It was unreasonable to restrict adult mill labour while coolies and mechanics in outside employments could work much longer hours. He was sure that the operatives would not quietly consent to their liberty being thus interfered with. Witness agreed that a restriction of hours was necessary, but thought that this should be done gradually. The men would become accustomed to shorter hours, would concentrate their attention on their work, and produce as much as they did now in the longer hours. He spoke from 20 years' experience, and believed

Mr. Meyers.

that if the hours were reduced the men would of themselves pay more attention to their work; the masters could not be stricter with them. The men would see that their pay was less and would become more regular in their attendance. He anticipated that with reduced hours the men would strike for the old rates of pay. Restricted hours would not injure the cotton industry, but rather would improve trade. Production would be reduced, there would not be a repetition of the crisis caused by the recent accumulation of stocks in the China market, and prices would go up. Japan had been bidding for the China market, but she would not be able to compete in the coarse counts. In the finer counts, 20s and over, Japan was competing successfully, and her mills were working 22 hours a day. Originally the Bombay mills worked 14 hours; then came a reduction to 12, which, after three months' working, was increased to 13, but the men refused to work. The operatives wanted the pay of 14 hours for 12 hours' work, and the masters had to give in. In the long days the men were only too glad to earn more wages by extra time on piece-work, and consequently the adults might object to a direct restriction of their hours. His Company had to run their mills for 13 hours in order not to be behind other mills. The mill-owners were not unanimous, but he thought the general opinion was that some restriction by legislation would be a benefit in the long run. A trade boom could be met by extra spindles; he considered that the shift system would be absolutely impossible on account of the scarcity of labour. The hours of the working day should be fixed by law; merely saying that no adult should work more than 12 hours would make it difficult for the factory inspector to enforce the law. Working the children in double sets, so much time in the morning and so much in the afternoon, was open to abuse, and should not be allowed. He did not believe in schools on the mill premises. His Company had three mills, and the certifying surgeon visited two of them three times a month, his fee being Rs. 10 a visit. He thought it would be much better if Government paid the certifying surgeon. Formerly the doctor used to come to the mill once a month. The medical inspector did not inspect the children, but if he chanced to see one underage he would notify the factory inspector. Under the present holiday system as laid down in the Act it was possible to get out of the Sunday holiday. His idea was that Sunday should be a compulsory holiday, and in the course of the year the other necessary holidays would amount to about 12 or 13 days. Women were made to work on Sundays, and the Act was also broken as regards their interval of 1½ hours. He agreed that the working hours of women should be made to coincide with those of the men, for by the present Act women were prevented from earning as much as they otherwise might. In Bombay women would not work alongside the men. It might be advisable to classify the women with the "young persons," but if the latter class were not created, then he approved of the same hours for women as for men. Women would make good weavers, but the owners could not get sufficient for the reeling department. The women themselves would not take their legal interval, and on account of their late arrival at the mill, they did not work more than 11 hours, including the 1½ hours' interval. They had domestic duties to perform, and could not come earlier. They arrived between 7 and 8-30 A.M. and left between 5-30 and 6-30 P.M., and they only took half an hour's rest in the middle of the day. If he insisted on their taking 1½ hours, they would strike. The women could go out as much as they liked, and no doubt in the course of the day they had more than 1½ hours off. He felt certain that with shorter hours the men would work harder—that applied to the piece-workers only. If the working hours were reduced by legislation, the owner would not succeed in reducing the daily wage. At present the men received 2 hours' pay for the extra hour worked after sunset. A restriction of hours would not do serious injury to the industry, and would pay in the long run.

Witness No. 43.

Mr. Shepherd. *Written evidence.*

Mr. H. B. Shepherd, general manager of Messrs. Greaves Cotton and Company's mills, Bombay.

I manage the following mills:—

	Spindles.	Men.	Women.	Total.
New Empress Mill	41,824	986	626	1,612
Howard and Bullough Mill	43,824	948	685	1,633
Connaught Mill	32,760	815	442	1,257
Apollo Mill	45,232	850	562	1,412
Old Empress Mill	34,680	590	410	1,000
James Greaves Mill	38,124	612	498	1,100
Imperial Mill	38,016	584	450	1,034
Leopold Mill	15,664	430	256	686
Totals ...	2,90,124	5,815	3,929	9,734

The number of days *per* year during which the above mills work over 12½ hours a day is 94; we had an average of 310 working days *per* year during the last 10 years, and the engines

Mr. Shepherd. ran 3,769 hours *per* year, making an average of 12 hours 9 minutes a day. Our longest day was of 13 hours 22 minutes, and the shortest day 11 hours 8 minutes. I don't think adults would work a fixed 12 hours day the year round, owing to the fact that they have always been accustomed to work from daylight to dark. If the law compels us to work for say 12 hours daily, we shall have to use the electric light for six months out of 12 months, and this our work-people will not do. We have often tried to work with electric light in short days of 11 hours 8 minutes, but they will not have it. They strike work, and dictate their own terms to the masters, complaining that the artificial light affects their sight. But they do not complain about working from daylight to dark, which gives 12 hours 9 minutes average daily work. If persons are passed by the medical officers as half-timers only, it is impossible to work them as full-timers; so I don't see why they should have to get certificates of physical fitness, as they must have been fully developed before they are allowed to pass out of the half-time stage. I do not consider it advisable to create a class of young persons between half-timers and full-timers. At present our hands are full trying to keep the law working with half-timers only, and with a new class of young persons it would be even worse. Half-timers are a nuisance, and are only kept on account of shortness of hands; if we could manage to get into our mills a full complement of hands, there would be no half-timers. Our women do not work at night; out of 3,900 women not one of them works more than 8 or 9 hours a day, although they are supposed to start at 7 A.M. and leave off at 6 P.M., with the customary rest at noon. At 8 A.M. I do not get 25 *per cent.* of the women at work, and they all leave off at 5 P.M. They are a class of work-people we have no control over; they come to work and leave off all through the day, at their own time. They are paid by piece-work, and if they worked the hours allowed them by law could earn up to 14 rupees a month, but very few of them do. They come out with anything from two to eight rupees owing to the short time worked, and to their having so many days absent out of a possible 26 days a month. It ought to be compulsory to employ half-timers in two sets—one for the morning and the other for the afternoon—so as to prevent illegal practices. Factory owners should not be compelled to provide elementary education for children at their own expense. At our mills for a number of years we did provide two schools for children and tried to make them attend, but found it was impossible. On seeing it proved a failure we had to give it up. We also provided houses for the work-people to live in, and after three years' trial gave it up. The people would not live in the houses because we could see what was wrong when they absented themselves from work; they went eventually to live farther away so that they could stay at home without our being any the wiser. We try to prevent non-working children from accompanying workers into our mills: in fact the *muccadams* keep them outside for fear of the factory inspectors. Non-workers generally come along with mothers or brothers bringing food, so if we insist on keeping them out, it keeps the food out also in some cases. I don't see why any attempt should be made to prescribe a standard of moisture for air in factories, because no installation of humidifiers can yet come up to our monsoon, the natural humidifier. The present latrine accommodation is quite sufficient; it is not advisable to have one seat to every 25 workers. It ought to be made compulsory to hang all doors of rooms containing workers so that the door could be opened from the inside in case of fire and swing outwards. Further precautions for fencing machinery in factories are not necessary.

Oral evidence. Witness stated that he had been in Bombay for 10 years, and previous to that he had had experience of the industry in Oldham. It was his opinion that an English operative would do three times as much work as an Indian operative. During his experience in Bombay he had not noticed any improvement in the skill of the mill-hands, nor did they apply themselves more to their work. They idled as much as ever, and a restricted 12 hours' day would not make them change their dilatory habits. Personally he would like a 12-hour day. He had offered to stop the mill for one hour for breakfast, in addition to the half-hour rest at midday, on condition that the operatives took their meal in that hour and stayed during the remainder of the working time in the mill. The men would not agree to the proposal, as they said their dinners could not be brought all at one time. In 1905 he worked his mill from 5 A.M. to 7-30 P.M., and in his opinion the work done by electric light was better than that done by daylight. It was too dark for the men to loiter outside, and they applied themselves better to their work. Since then they had objected to work late by electric light. In the course of the year the operatives generally took a lengthy holiday, and resumed work again in the same mill. In his opinion the English worker of 10 hours and the Indian worker of 13 hours were both tired out at the end of the day. Out of a 12-hour day witness thought that an Indian worker spent three hours outside the mill. He did not now use pass-out checks. The men were quite independent concerning the working hours. Recently they struck without warning, and when they could be got to listen to reason, they said they wanted more pay. They received an advance of one rupee each *per* month, and after two days' work they demanded another rupee. This, however, was refused. Out of 500 ring boys there would be 150 absent every day, consequently that number had to work double sides. A boy who looked after two sides would receive up to Rs. 16-8-0 a month, and for one side about Rs. 10. The jobbers had to find the labour, and it was to their interest to get a boy passed as over 14. Both doctors and inspectors were often puzzled concerning the age of the children, and anything in the nature of a prosecution came round to the jobber. The jobbers were paid by piece-work, and had to keep the machines going. The men's wages were not paid through the jobber, and he thought that it was only in rare cases that the jobber received a percentage of the wages. In his opinion mill operatives did not indulge in drink to any great extent. Out of 1,000 hands they would hardly find 40 who had put in a full month's work. Generally speaking it would be advantageous if women were allowed to work 12 hours, though he doubted whether they would work in the spinning room. Women now earned from Rs. 9 to Rs. 10 *per* month, but they could earn Rs. 14 if they cared to work the hours allowed them. Women were very bad in absenting themselves. Witness did not approve of the long hours of 1905, and if definite hours were fixed, they should apply all over the country. The advantage of daylight to dusk was that there was very little working by electric light, and he thought that the operatives would prefer this system. The 12 hours' day meant the general introduction of electric light, and the 12 hours would be worked even in the cold weather. His firm had tried

providing *chawls*, and had lost money over the experiment. The operatives refused to reside in the *chawls*, because when they absented themselves from the mill, the jobber knew exactly where to find them.

Witness No. 44.

Mr. Ward, of Messrs. Ralli Brothers, Bombay.

Mr. Ward. *Written evidence.*

Messrs. Ralli Brothers' pressing factories and ginning mills are :—

In Berar :

Shegaum, pressing and ginning factories.
Khamgaum, „ „ „ „
Akola, „ „ „ „
Amraoti, „ „ „ „
Chickli, ginning factory only.

In the Central Provinces :

Nagpore, pressing and ginning factories.

In Madras :

Tuticorin, press factory only.
Satur, ginning factory only.
Virdupatti, „ „ „
Tirumangalam, „ „ „

Approximately 60 men and 10 women are employed in pressing factories, and 82 women and 87 men in ginning mills. These numbers vary somewhat according to the size of the factories and mills. Mills and presses in Berar and the Central Provinces usually start work about the 1st November, and finish in April, May or June, according to the length of the cotton season. In Madras they usually work from February to August or September. The usual hours during which a ginning mill works are from 6 A.M. to 6 P.M., except in the case of night work, when they work for 24 hours with the usual stoppages of half an hour at midday and half an hour at midnight, and for 24 hours once a week. In a press factory, the hours are usually from 6 A.M. to 6 P.M., but occasionally a few hours more are worked according to requirements. The average number of hours a person is employed in a ginning mill is 12, during which time they have half an hour's stoppage at midday. There are, however, 25 *per cent.* more women employed than are actually required to work the factory, their duty being to relieve the other women as required, so that probably each woman will have intervals of rest amounting in the aggregate to at least 2½ hours. There are, however, no stated intervals at which the women are relieved. When a woman requires relief for food, rest or other purposes, she informs the *muccadumi*, who provides a relief. The usual average number of hours a person is employed in a press factory is 12, but this varies considerably according to the requirements of the season. The press may be required to work 5 or 6 hours a day, or it may be necessary to work 18 hours, although the latter time is extremely rare, and usually it does not occur more than four or five times in a season. The press *hamals* and others employed in the press house have no fixed intervals allowed for rest, nor is the press stopped for half an hour at midday. There are, however, a sufficient number of extra hands employed to ensure reliefs being given at any time that may be required for food or rest. The duty of seeing that reliefs are given as required devolves on the press overseer, and I have never heard a complaint from any of the *hamals* regarding insufficient time being allowed for food and rest. I certainly approve of the proposal to bring under the Factory Act all ginning mills and pressing factories, irrespective of the number of months they work in a year, or the number of hands employed, for the following reasons :—

First, unfair competition. The owner of a ginning mill or press factory which comes under the Factory Act has to employ a certificated engineer at a salary of anything between Rs. 100 and Rs. 250 *per* month. He also, in the event of his wishing to work his factory for longer than 12 hours a day, must in addition employ a night engineer at a salary of anything between Rs. 70 and Rs. 100 *per* month. Again, he must only work his employés for stated hours, as allowed by the Act; he must not employ children; he must have very ample latrine accommodation, his factory must be periodically painted and whitewashed according to the Act, and he must fit up more or less elaborate guards to pulleys, and fencing for shafting, according to the ideas of the local factory inspector. On the other hand, a factory owner whose factory does not come under the Act need only employ a fitter to look after his boiler and prime-mover at a monthly salary of anything between Rs. 30 and Rs. 50. He can work day and night without engaging a night engineer, or even a night fitter; he can work his employés as many hours as he thinks fit, or as many hours as they will work, and he has no expenses with regard to cleanliness, or safeguarding the lives and limbs of his employés; consequently, for the capital expended, the small factory owner whose factory does not come under the Act has larger profits than the large factory owner whose factory does.

Second, danger to employés. The danger to the lives and limbs of employés from defective boilers and prime-movers or unfenced and unguarded machinery is just as great, individually, in a small factory working only for a few weeks in the year, and which does not at present come under the Factory Act, as in a large one which does.

I do not approve of the suggestion that the employment of women on night work should be prohibited, provided they are employed under proper supervision; that is to say, care should be taken that no women are employed in a ginning mill or pressing factory for night work who have been employed in other ginning mills or pressing factories during the day. This might be more or less effectively brought about by the employment of a gin *muccadum* to provide the women, giving him distinctly to understand that he is liable to a severe penalty if he provides women for night work who have been employed elsewhere during the day. For the short time that women can be employed on night work during a cotton season, seldom if ever exceeding three months,

Mr. Ward. I consider that it would not injure them either mentally or physically, providing of course they are in good health to begin with. Further, as night work is optional with the women themselves I consider it would be a distinct hardship to prohibit them from being so employed, as owing to the difficulty of finding employment during the slack season they are glad of the opportunity of earning a few rupees during the cotton season. Therefore, to employ men on night work instead of women would lessen the total number of women employed in ginning mills, and consequently their earnings would be less, and possibly their poverty still greater than it is at present. I do not know of any modifications necessary in the present Factory Act, should it be made applicable to all ginning mills and presses. I suggest, however, that the Act should be revised and couched in clear and unmistakable language, so that he who runs may read, and that it should not be left to the option of the local factory inspectors to interpret the Act according to their lights; and further, it is essential that it should not be possible for the provisions of the Act to be evaded. I agree with the view that the line shafting should be adequately fenced. There are no objections whatever to the shafting being cased in between the drums or pulleys, and it certainly reduces the liability to accident. I may add that the whole of our ginning mills in Berar and the Central Provinces have their line shafting so cased in, and it is found from actual experience that there are no objections to it, and that it certainly decreases considerably the liability to accident. I see no reason why women any more than men should be prohibited from working in front of an opener, and in case of fire they would stand an equal chance with the men of escaping. With regard to the prevention of accidents from stones being hurled from the openers, as these stones are almost invariably thrown out at a tangent to the path of the opener teeth, a curved guard in front, as shown in the sketch*, would certainly reduce the number of accidents if it did not entirely prevent them. The objection to it is that it causes the cotton to be thrown down nearer the mouth of the opener than it would otherwise be, but as a certain number of men or women have, under present conditions, to be employed clearing the cotton away from the mouth of the opener, and as the same number could just as effectually clear it away with the guard fixed in position, this objection need not, I think, be considered insuperable. Of course the cotton could be carefully picked over and freed from stones before being put through the opener, but this seems to me to be a laborious and probably ineffective method. With regard to the prevention of fires, providing the opener is properly lagged inside with wood, and the teeth are made of wood so that there is no chance of stones coming in contact with iron or steel, and causing a spark, there is very little chance of a fire taking place. Of course there is always the danger of matches being left amongst the cotton, but so far as I can see it is impossible to eliminate that.

* Not reproduced.

Oral evidence. Witness stated that their factories in Berar and the Central Provinces came under the Act. They obtained enough men for two shifts, and this system was in force in all their factories. They also employed 25 *per cent.* extra women, except in presses, to act as substitutes He did not object to a 12 hours' restriction on the working day. They did not employ children. The women took 2½ hours off, in the aggregate, and the men about 1½ hours. The men in the presses contracted to work at the rate of so many rupees *per* hundred bales, and so they worked hard. In the ginning factories they paid 3 annas a day and 3½ annas a night to the women; and the men, according to the work they did, earned from 6 to 8 and 12 annas a day and a night, respectively. Women should certainly be allowed to work at night in these factories. He doubted whether they could obtain sufficient adult males for the work, and if women were prevented from working it would be a hardship. For two and a half months in the season night work was absolutely necessary, and if the owners were not permitted to do this work, then the season would be lengthened. They were occasionally caught by rain, but never by the proper monsoon. They had never had any bad accidents in front of the opener, which in their factories contained no iron work. With proper ventilation in a large factory he thought that there was very little danger to those working in the front of the opener. Men could easily do the opener work. All their shafting was protected. He was of opinion that the wording in the new Act should be clear, and precise, so that individual inspectors could not interpret sections differently. The labour supply was plentiful at their factories. Some of the hands received their wages weekly, and some daily. The rates of pay in Madras corresponded fairly closely to those in Berar, but perhaps were hardly so high. The coolies in those districts did not earn 12 annas a day, and that wage was not paid merely in order to attract labour. The gin fitters were brought from Broach. The wages paid were not higher than those paid in neighbouring mills, and did not draw away mill labour. The hands received a weekly holiday. The charge for ginning was about Rs. 2 to Rs. 2-8-0 when there was no combination, and Rs. 4 to Rs. 4-8-0 when they had a combination, for 280 lbs. ginning weight Rather than provide more ginning power he preferred the shift system, but new gins were being erected all over the country. Children were not allowed in their gins. Any woman desiring a rest was relieved by the *mukadam*, out of the 25 *per cent* extra women employed. If the working hours were restricted to 12, he saw that the simultaneous shift system, in presses which work for about 16 hours, would not be allowed, and the trade would have to adapt itself to the new conditions. It would mean extra hands for the additional few hours, and so much more expense. After a man had worked his day shift, he should be prohibited from working in another gin at night. It would be difficult to prevent this, but the Act should be strongly worded in order that there should be no evasions. The ginning work went on night and day by double shifts, and the pressing was carried on steadily during the day for 12 hours with an occasional 2, 3 or 4 hours in addition. He did not think that these hours injuriously affected the health of the hands. Witness approved of the general application of a 12 hours' day to gins, but would like presses excepted on account of the additional few hours which often had to be worked. The hands suffered in health when they worked for 18 hours. It would not affect the trade if women were allowed to work 12 hours in day and night shifts. Personally he considered that the male adult was capable of doing more than 12 hours' work in both gins and presses. Males could stand 16 hours, considering the way in which they worked, together with their holidays, and the intervals for rest. The Act should apply to all factories, and the inspection should be more strict and impartial than it was at present.

WITNESS No. 45.

Sir Sassoon David, Bombay.

Sir Sassoon David. *Written evidence.*

The factories I represent are:—

The No. 1 and No. 2 David Mills. The Standard Mills. } The total number of hands employed is as follows:—

	Men.	Women.	Children.
No. 1 and 2 David Mills ...	1,668	1,026	80
Standard Mills	1,707	231	...
	3,375	1,257	80

During the last ten years each of the above factories has worked over 12½ hours a day, in each year, for the following number of days:—

	David Mill No. 1.		David Mill No. 2.		Standard Mill.	
	Number of days.	Average hours daily.	Number of days.	Average hours daily.	Number of days.	Average hours daily.
1907	267	13·0	267	13·0	267	13·0
1906	311	13·0	311	13·0	311	13·0
1905	311	13·20	311	13 45	311	13·20
1904	312	13 30	312	12·17	312	133 0
1903	312	13·12	312	11·55	312	13·12
1902	309	13 45	309	12·26	309	13 45
1901	306	13·18	306	11·43	306	13·18
1900	280	11·46	280	11 38	280	11·46
1899	299	13·11	180	12 46	299	13·11
1898	309	13·29	...	.....	309	13 29

The working hours of adult males should not be limited. To my knowledge the physique of the workers has not been affected by existing conditions. If working hours are to be limited, then 13 hours a day, with an interval of half an hour in the middle of the day, should be the limit. The best method of enforcing the restriction would be by legislation, applicable to all Indian mills, the working hours being fixed from 6 A.M. to 7 P.M., standard time. I am not aware of the employment as adults of persons between the ages of 12 and 14 in our mills, but speaking generally I have no objection to the creation of a special class of workers intermediate between the half-timer and the adult, *viz.*, "young persons." I do not think it desirable to have a special register of all workers under 16. The employment of women at night should be prohibited. The present minimum age of half-timers should not be raised. It is necessary to have certificates of age and physical fitness before children are allowed to work in factories. Certificates of age and physical fitness for working full-time should not be required before children, who were half-timers, are allowed to work full time. A nine years old child when admitted as a half-timer should be provided with a copy of the certificate of age and fitness, and no other certificate should be necessary when he begins as a full-timer, as no mills would admit unfit persons to work as adults, or as "young persons," whether they possessed new certificates of age or fitness or not. Children should not be made to work in double sets, but only in regular morning or evening sets. Factory owners should not be obliged to provide elementary education at their own expense. It would be advisable, if practicable, to make a rule prohibiting non-working children from accompanying workers to dangerous parts of factories. It would be desirable, by testing samples of air taken from factories, in India, to attempt to prescribe an analytical standard of purity for air in factories, with a view to secure proper ventilation, but it would be very difficult to apply a general rule for all Indian mills owing to the existing structural conditions and other difficulties. I have no objection to the use of any further means for the improvement of ventilation and sanitation suitable to the Indian climate. It would be difficult to prescribe a standard of moisture for the air in Indian factories, with reference to manufacturing processes and to the health of workers; existing conditions vary in each mill, and also owing to the variety of climatic conditions in the several provinces. It is essential to fix a standard of purity for the water used for humidifying purposes. I do not think it necessary to increase the existing latrine accommodation, though it would perhaps be desirable to have separate urinals. All doors of working rooms should be made to open from inside outwards excepting fire-proof doors for insurance reasons. Arrangements should be made to secure uniformity in the administration of the Factory Act throughout India. Full-time medical inspectors of factories, who should be barred from private practice, should be appointed to assist the present inspectors in securing the due observance of the Act. No time limit should be allowed to half-timers within which they would be allowed to work without a medical certificate, and they should not be allowed to join even for a single day without a certificate. I am in favour of the suggestion to create a class of "young persons," especially if it is deemed necessary

Sir Sassoon David. to restrict the hours of working. I am not at all in favour of legislation for restricting the hours of male adults, but if it is thought necessary to restrict the hours, then the introduction of "young persons" without new certificates would obviate the necessity of legislation, and automatically restrict the mills' working hours to the hours fixed for "young persons," as this class of operatives forms a large proportion of the hands employed. The age of "young persons" should be between 14 and 17, and they should be allowed to put in only 12½ hours of actual work a day. Out of our employés 35 *per cent.* are "young persons" between the age of 14 and 17. Definite time limits should be prescribed within which only the employment of operatives would be legal assuming, of course, that it is eventually decided to restrict the hours of adult labour. But this latter result regarding the restriction of adult labour can be obtained by fixing a time limit for "young persons," as already explained. The special circumstances of the mill industry in India are such as to demand full consideration of local circumstances, customs, climatic conditions and the latitude for rest, &c., enjoyed by the operatives during working hours. The 13 hours working day is 13 hours in name only, as the intervals taken up without permission by the operatives in smoking, idling, &c., reduce the actual working hours to a great extent. The operatives cannot work, like the Lancashire operatives, for so many fixed hours at a regular stretch, or for any fixed period of time, as they always go to their native places as soon as they are able to do so, and they return whenever they like and join any mill they can. Even when the engines work for 13 hours a day the operatives scarcely put in more than 8½ or 9 hours of work. This being the case it will be readily seen that if the working hours are restricted by legislation, mill-owners will have to make up for lost ground by demanding steadier and more regular work, and more constant and sustained attention on the part of the operatives; and as these are not at all likely to agree to the new conditions, or to be able to put up with them, the result would lead to strikes amongst the mill-hands. As it is, we have to cope with an insufficiency of labour, and have to engage substitutes, and any unwonted strictness or supervision would lead to a great deal of trouble and mischief. Moreover, even if they agree under strict supervision to work steadily for a number of hours a day without frequent intervals, they will soon deteriorate in health, or break down, owing to the climatic conditions and old habits of work. It is for these reasons as well as a matter of principle that I entirely disapprove of legislative interference with adult labour. I do not approve of the suggestion that factory inspectors should be obtained from the United Kingdom where the conditions are different from those prevailing in India Nor do I think it necessary to have inspectors trained in England. I do consider it essential that any law which it may eventually be decided to introduce should contain provisions introducing a certain amount of elasticity in its actual operation. A matter that requires careful consideration at the hands of the Commission is the question of the women workers. These are at present supposed to attend for 12½ hours a day, and are allowed 1½ hours in the middle of the day, so that they are supposed to work 11 hours a day. But owing to domestic and other reasons women workers invariably infringe the 12½ hours' rule, and attend or leave off work whenever they like, without interference on the part of the managers. They cannot put in a 12½ hours' day, and therefore in order to make up for the time lost owing to their absence, they work during the 1½ hours allowed them for a midday recess, and at the most work for eight or nine hours a day. The present system therefore works unsatisfactorily both for the mills and the women operatives. I would therefore suggest that the present 1½ hours' interval should be done away with, and only half an hour allowed instead, and a rule should be made fixing the attendance of women operatives, say from 6-30 A.M. to 6 P.M., or for the same number of hours as male adults. I may also add in passing that the question of making each Sunday a compulsory mill holiday should be earnestly taken up.

Oral evidence. Witness stated that if there had to be some restriction of hours he approved of the formation of the "young persons" class, but for adult labour no restriction was required. Personally he did not think that the operatives would suffer in health if the long hours of 1905 were continued for some time. Long hours mean that the men earned more money, and took more holidays. The men had never struck on account of long hours. He considered that the "young persons" class would automatically fix the hours of labour, for mills could not continue working without their aid. If trade become brisker, they could increase the number of spindles, and work with more hands over the 12 hours. Under the present conditions it would not pay to run the weaving department by itself, with the rest of the mill stopped. It was spinning and not weaving that was responsible for the long hours. The weavers earned good wages, were a separate class altogether, and would not work long hours. The weaver also had to pay greater attention to his work, he worked harder than the spinner, and he would not consent to work for longer hours. Since 1902 most of the mills had gone in for electric light, and since 1905 the working day had been 13 hours. Previously some mills had worked 14 hours. In 1905 they arranged to work 12 hours, and then the Mill-owners' Association agreed upon 13 hours. The 12 hours' day was tried for a few months, but the men would not have it. The 13 hours' day was practically forced upon the owners by the men. Should the working day be restricted to 12 hours, he would expect trouble from the men. Owners would have to be stricter, and it would be a long time before matters became adjusted. The creation of a "young persons" class was the lesser of two evils, and would enable the owner to say to the men in the event of their complaining, "Bring us the men and we will work longer hours." There would certainly be keen competition among mill-owners for adult labour, and some mills would secure sufficient adults to continue working long hours. He considered that the young persons could work 13 hours, including the half-hour interval. He agreed that a uniform working day would be beneficial to the trade, and he would have the same hours all over India. He believed in the 12½ hours' day, actual work, and would not give up the odd half hour. In his opinion the men would not appreciate shorter hours, and would not work harder. A longer interval in the middle of the day was of no use. The present half hour was not necessary for the majority of the hands, but the stop was good for the engine and boilermen. The operatives were quite independent, and if they had no proper organisation they had an understanding among themselves. They had now had electric light for six years, and for the electric light working the men had received extra wages. If the hours were now reduced, it would bring the condition of the workers back to what it was at the time previous to the introduction of the electric light. In the meantime the cost of living had increased, and

the workers had acquired more expensive and extravagant habits. He thought that Sunday should be a compulsory holiday, and he calculated that there would have to be ten extra holidays in addition. He considered this would benefit the men more than a reduction of hours. Before the present Act the Bombay mills worked every day of the month and year. It was possible, under the present holiday system, to have 12 days of work between holidays, but it was not done in practice. The mills did not work purposely on Sundays, but only when a holiday had intervened. He thought that when once the men realised that Sunday was a holiday, they would appreciate the day's rest. There was keen competition between India and Japan for the China market, and in his opinion Japan was already ahead in all counts. If the cost of production was increased in India by shortening the working day, then the home industry must necessarily be seriously handicapped. The Japanese mills worked 22 hours in two shifts; in India labour was not available for two shifts. The mill worker was better off than other labourers, but he did not know how much they saved. They must save something, otherwise they could not go to their country so frequently. They retired when between 40 and 45 years of age. They had then saved enough money to enable them to leave the industry, and it was not because they were unfit for further work. The building of *chawls* should be undertaken by Government or the Improvement Trust. There were not many mills that could afford to build *chawls*, for the present profits were largely invested in mill extensions. He could not get his own men to live in their mill *chawls*. This, however, was not because they had an idea that they were under stricter supervision, but on account of the fact that, out of four persons in one room, only one might work in his mill, and the other three persons elsewhere. Women should be allowed to work similar hours to the men, and their one and a half hour midday hour could readily be abandoned. Their household duties made them irregular in their attendance, and there was also the caste question to be considered. He had no experience of gins, but thought they must be put on a different basis owing to the different conditions affecting them. Witness could not get operatives from other parts of the country for mill labour.

Sir Sassoon David.

Witness No. 46.

Mr. Nowrosji Edulji Screwalla, Bombay.

Mr. Screwalla. *Written evidence.*

I represent, as manager, the Coorla Spinning and Weaving Company, Limited, which employs on an average 915 men, 330 women and 225 children. The factory has worked over 12½ hours a day for 112 days a year during the last ten years, and the average daily number of working hours during that period comes to 12¼ hours. The working hours of male adults should not be limited, though it is very desirable to have a uniform working day of 13 hours. The physique of workers has not been affected, to my knowledge, by long hours. The hours should not be limited to 12 working hours. The engine should be stopped for half an hour between noon and 2 P.M. There is no necessity to create a new class of workers intermediate between half-timers and adults, for that will in my opinion encourage illegal employment as adults of children between the ages of 12 and 14. It would be a burden on the mill authorities to keep a special register of all workers under the age of 16. The present restrictions are quite sufficient, or, if desired, the factories could be inspected more frequently than at present. The employment of women at night should be prohibited. The minimum age at which children are allowed to work in factories should not be raised beyond nine. A certificate of both age and physical fitness should be required before children are allowed to work in factories. Certificates of age and physical fitness should be required before allowing children, hitherto employed as half-timers, to work as full-timers or adults. It should be prescribed by law that children should not be employed except in regular sets, whether morning and afternoon sets or in double sets. Elementary education to children was given by factory owners at their own expense, but the scheme did not work as the children liked better to play during the recess than to attend school. It is not advisable in my opinion to force factory owners to provide elementary education to children. Samples of air taken from the factories in India should be tested, and an analytical standard of purity for air prescribed to secure proper ventilation. A standard of moisture for the air in factories, with reference both to manufacturing processes and to the health of the workers, should similarly be provided. A standard of purity for the water used for humidifying purposes should be fixed. The latrine accommodation required at present is in my opinion quite sufficient, *i. e.*, one seat for every 50 workers. The provision of separate urinals should be insisted upon. Mostly all doors in the factory are sliding ones, and the few that are hung open outwards in case of fire. These have been approved by the Fire Insurance Association, and I do not think it advisable to disagree with it. Instructions are given by inspectors, whenever they find it necessary, for fencing certain parts of machinery, and they have seen that the instructions given are carried out. No further precaution is in my opinion necessary. Uniformity in the administration of the Factory Act throughout India should be secured. If the Commission think it advisable they may appoint full-time medical inspectors of factories to assist the present inspectors in securing the due observance of the Act. For my part I have no objection. A statement showing the production *per* spindle *per* hour for working days of varying length is given:—

Working day of	Production *per* spindle *per* hour of 20s.	Actual count spun.	Percentage of waste.
11 hours 7 minutes	·65 oz.	19·60s.	.....
13 hours 14 minutes	·53 oz.	19·79s.	.....

Mr. Screwalla.

The longest and shortest days have been taken in giving the above average production *per* spindle *per* hour. The fall in the production during the longest days is mostly due to the irregular working of the engines, owing to there being very little water in the tank, and to the high temperature thereof. The percentage of waste is not given as it depends (1) on the quality of cotton used, (2) on the climatic conditions, and (3) on the attendance of the workers, as very often we have to work short-handed. In my opinion a limit of 15 days should be prescribed during which children could be employed on half-time prior to their being examined for a certificate of age and physical fitness. This period is in my opinion sufficient for collecting children for examination, and then either sending them to the surgeon or sending for the surgeon to examine them. Each child certified by the medical officer as fit for working as an adult should have with him or her the foil of such certificate (as granted under Rule 21 of the Act) and without which no factory owner can employ him or her as an adult. I am not in favour of creating a new class of workers, *viz*, young persons, between the ages of 14 and 16. Most young persons are employed in the ring spinning department, and if any restrictions are put on the working hours of this class, the industry will suffer. If the hours of adult labour are restricted at all, the restriction should take the form proposed, that is, the imposition of definite time limits beyond which no operative could be legally employed. It is not necessary to have inspectors from the United Kingdom, as the present ones are quite capable of doing their duty. As regards provisions introducing a certain amount of elasticity in the actual operation of the Act, I beg to suggest that in no case should an immediate prosecution be instituted, but sufficient opportunity should be given to so-called offenders to clear up or correct matters.

Oral evidence.

Witness stated that he had been thirty years in the industry. He was opposed to any restriction of the adult working day. In the long days his mill ran for thirteen hours and fourteen minutes. They had no electric light, and a fixed 12 hour day would mean its introduction. Moreover very few of their hands lived in Coorla, and he doubted whether they would stop to complete the 12 hours' day by artificial light in the cold weather, as they liked to get home before dark. In the hot weather the engine started at 5-5 A.M. (Bombay time) and the whistle went at 4 A M. They left off work at 7 P M. (Bombay time) and got home about 8 P.M. Witness was always short of hands owing to the situation of the mill outside Bombay. He also paid slightly smaller wages than the Bombay mills. He employed a large number of half-timers for ring spindles. The women only worked in the reeling department, and would not work with the men. He estimated that the hands only worked from 10 to 11 hours in the hot weather, but there was not so much idling in the cold season. He had observed an improvement in skill, but not in application, and the men were becoming more extravagant. A 12 hours' day would result in an improvement in work, but the owners would have to insist on steadier application to work. He thought this would gradually come. At present when they knew that the mills did not close till 7 o'clock, they took time off for washing, and it was his opinion that if they knew they would be free at 6 o'clock, they would do their washing, etc., after closing time. Witness did not think there was any practical difference in the production *per* hour for long and short days. The doctor came from Thana every three months to examine the children, and he rejected a large number. His hands took about two months off in the year, and worked in the fields, where they could get higher wages. An attempt at having a school had not been successful •In 1905 his men went to the Bombay mills, and he had to pay those that remained an extra two annas a day. The jobbers had no objection to a 12 hours' day, and they thought that the men would apply themselves better to their work then. The men might complain at first of smaller wages, but this would adjust itself in time. The operatives were a healthy class, and had no special diseases.

Witness No. 47.

Mr. Lakriwalla.
Written evidence.

Mr. Nowrosji Oursetji Lakriwalla, manager of the Saraswati Mills, Bombay.

The working hours of adult males should not be limited; the physique of workers in Indian mills is not affected by long hours (long meaning 13 or 14 hours). They take unusually long intervals of rest on some pretext or another while at work in the mills, hence their work is not so exhausting as might appear from the number of working hours. I am of opinion that the natural hours of work from sunrise to sunset, with half an hour's midday rest, would be desirable. So far as I know, there has been no illegal employment as adults of persons between the ages of 12 and 14. The present law is sufficient safeguard against such a practice. There is therefore no necessity for the creation by law of a special class of workers between the half-timer and the adult. The present system of keeping the register of half-timers is quite adequate. The employment of women at night should be generally discouraged, but an exception might be made for such factories as work only for a few months in the year. The minimum age at which children are allowed to work in factories should not be raised beyond 9. Certificates of age only should be required before children are allowed to work permanently. Certificates of age only, as is at present required, are essential; the question of physical fitness had best be left to the discretion of the employers, as it would be against their interest to employ a half-timer or a full-timer who is physically unfit to work. It should be prescribed by law that children shall not be employed except in regular sets. I am of opinion that a whole day elementary school should be provided by the employer on the premises where the morning set of children might be taught in the afternoon, and the afternoon set be taught in the morning, thus preventing children of each set from working at any other factory as half-time workers, and thus really working as a full-timer. A rule prohibiting non-working young children from accompanying workers to dangerous or unhealthy parts of factories is generally desirable, but I believe that the manager should have a very wide margin allowed for the enforcement of the rule, as in many cases it is found from actual experience that such children as cannot be left alone at home for want of any other guardian, or on account of their tender age, cannot remain away from their mothers, and generally accompany them even when they are workers in a mill. No attempt should be made to prescribe an analytical standard of purity for air in factories, as the weather conditions are so variable in the differents parts of the country at different seasons of the year. There is no necessity for prescribing a standard of moisture for air in

factories for the same reasons. There would be no objection to a standard of purity being fixed for water used for humidifying purposes. It is not necessary to raise the standard of latrine accommodation to one seat for every 25 workers, but the provision of separate urinal accommodation should be insisted on. It should be prescribed that all doors of working rooms shall be so hung as to open readily from the inside outwards in case of fire. No further precautions than exist at present are necessary for fencing machinery in factories. Arrangements should be made to secure uniformity in the administration of the Factory Act throughout India, but exceptions might be made in the case of such factories as work only for certain months or seasons of the year. Full-time medical inspectors may be appointed if it is found that the present number of inspectors is not sufficient to secure the due observance of the Act. I represent the Sarasvati Mills, Limited (Bombay). There are 500 men, 250 women and 50 children employed. The factory has worked for 153 days in the year over 12½ hours a day. The average daily number of hours in each year comes to about 12 hours and 18 minutes. If certificates of physical fitness as well as of age be required prior to the employment of children on half-time, I deem it necessary that some reasonable limit should be prescribed within which the employee should be allowed to work pending examination for a certificate. I would suggest a period of one month as a reasonable limit. It would be desirable that a medical examination of half-timers should take place at the mill premises every fortnight, so that the manager of the factory might be always in touch with the medical officer and endeavour to carry out his instructions, thus rendering the operation of the law easier. Assuming that the recommendation not to allow half-timers to work full time until they have obtained certificates of age and fitness is accepted in principle, it will be very difficult to apply it in practice. I would suggest as a safeguard that the mill authorities should insist on a leaving certificate being obtained from a mill-hand before employing him, and that the certificate should state whether the hand was working as a half or a full-timer. I am not in favour of the creation of a class of young persons as in the United Kingdom. If the law be eventually amended so as to create such a class, and to restrict their hours of employment, I anticipate a great reduction in the number of hands who can now work as full-timers, which will greatly interfere with the economical working of the factory. The probable number of young persons, assuming an age limit for that class of 14—16, employed in the factory would be about 200. Assuming that it is eventually decided to restrict the hours of adult labour, the restriction should take the form of fixing a maximum number of hours, leaving it to the discretion of each individual employer to settle the time for the commencement and the termination of the day's work. I do not approve of the suggestion that inspectors from the United Kingdom should be obtained for factory work in India. I do not consider that all factory inspectors should in future receive a considerable portion of their training in England, having regard to the conditions and habits of the hands, and the circumstances that prevail in Indian factories being entirely opposed to those existing in the United Kingdom. I do consider it essential that any law which may eventually be introduced, if more stringent than that at present in force, should contain provisions introducing a certain amount of elasticity in its actual operation. I would suggest that the managers of factories should be taken into the confidence of the Government officers, and that prosecutions against them should never be undertaken unless it is found that the managers in question have wilfully disregarded warnings of the inspectors from time to time. It is desirable to provide cheap dwelling-houses for factory hands near the factories, where possible, but in cases where such open lands are not available, houses should be built in a good healthy station in the suburbs, and cheap and convenient railway accommodation provided for. A statement showing the effect of varying lengths of working days on production is appended:— **Mr. Lakriwalla.**

Working day of	Production *per* spindle *per* hour of 10s.	Production of reeling yarn *per* spindle *per* hour of 20s.	Percentage of waste in spinning department.	Period covered by these statistics.
	Ring spindles.	Ring spindles.		
12 hours	·966	·416	6 *per cent.*	1907—Month October.
13 hours	·961	·479	5 „	1907—Month August.

These statistics are by no means conclusive, as there are other factors besides the time for which the mill is working, *viz.*, cotton, steadiness of labour, weather, all of which materially affect production.

Witness stated that he had been engaged in the industry for 20 years. Originally he was an engineer, and he had gone through all the mill departments up to manager. He had no electric light, and his hands did not favour long hours with electric light. They did not complain that they received less wages than the electric light mills, nor did they leave him for the long-hour mills. Witness believed in working by daylight, and thought there should be a restriction of hours based on the average of daylight working. The production *per* hour was the same in the long as in the short days, and the men were equally casual all the year round. In his mill the jobber did not employ the children illegally. He paid the carding department by piece-work. An experienced ring boy would earn from Rs. 10 to Rs. 11½, and the half-timers Rs. 3½. If the hours had to be restricted by law, he would fix them at 12½, exclusive of the interval. With the fixed day, electric light would become necessary. His half-timers worked their 7 hours all at once, with half an hour's interval, and they did not go to other mills. He did not think that this practice was at all general. The child ought to be employed for a week being before being examined for physical fitness, as in that week it could be seen whether he was fit or not for mill work. He did not at present work children before they were inspected. ***Oral evidence.***

WITNESS NO. 48.

Mr. H. B. Warden, Bombay.

Mr. Warden.
Written evidence.

I am the manager of the Victoria Mills, Gaumdevi. Total number of men, women and children 1,100—males 631, females 376, half-time boys 57 and half-time girls 36. In the absence of records I am sorry I cannot say what hours have been worked during the last ten years. It is necessary to limit the working hours of adult males. Their physique has been affected by long hours. I would say the working hours should not exceed 13 hours *per* day, inclusive of half an hour's rest at midday. The legal working hours should be from 6 A.M. to 7 P M. Engine should be stopped half an hour between 12 and 2 P.M. Factories working on the day shift system may be allowed to work from 5 A M. to 8 P.M., with the restriction that no adult male should work for more than 12 out of every 24 hours. I am not in favour of creating a separate class of "young persons." It would be difficult to apply regulations to "young persons", even if a separate register of such hands is maintained. The employment of women at night should be prohibited. The minimum age of children should not be raised beyond nine. Certificates of age should be required before children are allowed to work in factories, but any strict regulations as regards their physical fitness will not be to their interest, as many of them are naturally of a weak constitution. It is desirable to prescribe that children shall not be employed except in sets, and primary education should be given to them by mill-owners. Non-working children are seldom seen accompanying workers in the mill. There is no objection to test the air and fix a standard of purity. It is difficult to prescribe a fixed standard of moisture, as the circumstances of different districts and localities vary considerably. Pure water should be used for humidifying purposes. The latrine accommodation at present is, I think, quite sufficient. Separate urinal accommodation should be provided in every mill. All the doors of working rooms should be made to open from the inside outwards, wherever feasible. The present precautions for fencing machinery are quite sufficient in my opinion. Arrangements should be made to secure uniformity in the administration of the Factory Act throughout India. The present medical inspection of factories is quite adequate, and in my opinion secures the due observance of the Act. I am in favour of allowing children to work from 10 to 12 days prior to their medical inspection. It is convenient to have medical inspections twice in a month. I am of opinion that the suggestion that no child should be allowed to work as an adult unless certified as physically fit could not be advantageously applied in practice. The easiest safeguard to prevent non-certified children from obtaining work as adults at some other factory would be to make them criminally responsible for the non-observance of the Act. Creation of a class of young persons is sure to practically determine the working hours of the mill. A major portion of the hands employed in the spinning department and a good number of other work-people in the mill come from the proposed class of young persons. I am in favour of definite time limits beyond which no workman should be employed. It would then be impracticable for operatives of one mill to work overtime in any other mill. It would also facilitate the careful inspection of the mills by the factory inspectors. I consider that all factory inspectors should be secured in India. We have many competent men in India who have worked long enough in mills and are of wide experience to work as inspectors. I am of opinion that any law that may be made should not be of a stringent or harassing nature. As regards the housing of the mill hands, I am of opinion that the breaking down of many a *chawl* by the Improvement Trust has of late created difficulties in housing the workmen properly, and consequently the Government should co-operate with the mill-owners by allowing the Improvement Trust to lend money on easy terms to such mill-owners as are desirous of building *chawls* for their operatives.

Oral evidence.

Witness stated that he had been a manager for the last fifteen years. Originally he was a mechanic, then a jobber in the spinning department, and finally carding master. Witness did not supply hands when a jobber. That work was always attended to by the Hindu jobbers. He had electric light, and worked his mill from 6 A.M. to 6 P.M. at present. In June 1905, they worked from 5-30 A M. to 6-45 P.M., and in April 1906, they worked from 5-20 A.M. up to 8 P.M. They all did so, because they were ordered to do so by the proprietors. The men were completely exhausted at the end of the day, and the attendance during the month was very irregular. The men complained about the length of the hours, and the fact that, with the journey to and from the mills, they had only a very few hours at home. It was chiefly the young adults who complained, and they mostly belonged to the *mahratta* caste. Witness objected to the "young persons" class, which would disorganise the working of the mill, and create confusion, if the hours did not correspond with those for adults. He did not object to the class if the young adults were allowed to work for 12 hours. A youth of over 16 could work 13 hours; a boy of 14 to 16, 12 hours. Varying hours would cause inconvenience in the mill. Having himself worked in the mill, he knew that the long hours of April 1906 were exhausting to the men. The present hours did not affect their health. The hands were willing to work 12 hours, and even up to 13, but not beyond that. He did not employ weakly children. Some children passed as of proper age were occasionally too weak for the work. He sent these children away, because it did not pay to keep on inefficient workers, and he wanted to be rid of all responsibility. Mill-owners must be allowed to engage children before being certified. In his mill children were only engaged on the first of the month, and the doctor came on the second Thursday. The children in the meantime were placed in the school, which prevented them going elsewhere, and they were also ready for the inspection. The child received no wages for these ten days, and received no money at all until certified by the surgeon. The jobbers did not take the children from the school, as there was a proper master at the school who would report such an occurrence. He did not think the children learnt much as their attendance could not be made compulsory. The idea of the school was to prevent them associating with undesirable persons. The doctor came once a month, and received Rs. 10 a visit and four annas for every child examined. If a child applied for work after the second Thursday, he would not be taken on, and he would have to re-apply on the 1st of the month. At present they were not greatly in want of hands, but if the necessity arose, they could engage children at any time and send them to the doctor. He would

like all mills to start and finish at the same hour, otherwise the men out of the mills which closed early would go for one or two hours' work into those mills which closed later. Witness thought that the *chawls* should be built by the Improvement Trust. The hands went home after 12 or 18 months in the mills, and they took four or five holidays every month, over and above the weekly holiday. Witness had not noticed any improvement either in the habits or the skill of the work-people. The jobbers received from Rs. 65 to Rs. 70 *per* month; he had not heard of any system of *dasturi* in the mills. The hands idled about, but the jobbers did not leave their work. Mr. Warden.

Witness No 49.

Mr. B. H. Saklatvala, manager of the Dinshaw Petit Mill, Bombay.

Mr. Saklatvala. *Written evidence.*

I am of opinion that the working hours of adult males should not be limited, as they are not excessive; moreover, their physique, as far as I can judge, has not been affected by the present working hours, though personally I would favour a working day without artificial light. A "young person" class is not needed; but in order to guard against the illegal employment of children as adults, certificates of physical fitness and of age should be demanded. The employment of women at night should certainly be prohibited. The present age limit for children requires no change. Certificates of age and physical fitness will prevent malpractices, and in order to distinguish adults from half-timers, certificates of age and physical fitness should be demanded. Morning and afternoon sets are preferable for children. Elementary education should remain voluntary. Non-working young children should not be allowed to accompany workers to the factories; they should be stopped at the mill gate. As the mills are better ventilated than the places mill-hands live in, therefore there is no further necessity to take samples of air for testing purposes. As for standards of moisture, they should be optional, as mill-hands generally resent such measures. A standard of purity for water used for humidifying purposes is desirable. The present latrine standard of one seat to fifty workers has satisfied the demand hitherto. All doors should be made to open from the inside outwards, in case of fire. The existing precautions for fencing machinery are ample in my opinion. Uniformity in the administration of the Factory Act throughout India will give fair justice to all the factory-owners. Full-time medical inspectors are likely to facilitate examinations which will tend to prevent much misunderstanding between the inspector and employers. I represent, as manager, the Manockjee Petit Mill's branch, *viz.*, the Dinshaw Petit Spinning and Manufacturing Company, Limited, Parel:—

Number of men employed	1,728
Do. women do.	266
Do. children do.	35
Total	2,029

A statement showing the number of days during which the mill worked over 12½ hours during the last ten years is appended. From this statement it is evident that, as the mills worked up to now from sunrise to sunset, the average daily number of actual hours of work cannot be considered oppressive. No other trade or profession is hampered or tied down to any particular working hours. I opine that there is absolutely no ground for any hard and fast restriction of hours for mill-hands, neither the employers nor the hands want such restrictions on their legitimate freedom. Children should be allowed to be employed in factories one week previous to their obtaining certificates of physical fitness as well as of age, provided the certifying surgeon attends the mill once a week for this purpose. Children who have worked as half-timers should not be allowed to work as adults, unless they are certified as full-timers. The best safeguard to prevent imposition is to insist on the aspirants producing fresh certificates of age and physical fitness from the medical authority before they are allowed to work for full time. A class of "young persons" is not needed, but in the event of such a class being created, and their hours of employment being restricted, it is likely to create confusion and cause inconvenience to the employers. I am not at all in favour of any time restrictions on the hours of work; if it is left to the discretion of each individual employer to settle the time for the commencement and the termination of the day's work, the result will be not only unsatisfactory, but would also lead to sharp practices, so it is best to let it alone as it is for years past, *i. e.*, from sunrise to sunset only, and not with artificial light. Training in England will not make a factory inspector competent to judge and understand the ways and habits of Indian work-people; intelligent men with Indian experience are likely to cause less friction. There should not be any hard and fast rule applied to the working of the factory law. It should be made less rigorous, and more elastic, which will be very desirable for all concerned. Factory-hands should be housed as near as possible to the mills, as it is advantageous to both the parties. Some of the mills have a few *chawls* built for some of their work-people, but more must be built, cheap enough to suit the pockets of the poor hands, and the owners should not expect these *chawls* to be a financial success. This procedure obtains in our mills. I think the above points are clear and sufficient to safeguard the interests of both the parties, *viz.*, the employers and the employed. The time has in particular now come to soften the rigour of the law when there is scarcity of factory labour. The hands are now better cared for, they draw comparatively more wages owing to their being aware of the present situation; consequently there have been more systematic strikes recently, which have resulted in the masters yielding by giving the hands increased rates of wages in all the departments of the mills, though some of the departments did not deserve the increase given to them, but owing to the combination of the hands of one department with the others the non-deserving departments also obtained the benefit of the increase, with the deserving hands. The operatives are now better clad and fed than hitherto; besides, the factory-hands are not comparatively so illiterate as they used to be a quarter of a

Mr. Saklatvala.

century ago, because a majority of them now enter the mills with more education, which gives them a better understanding of the laws of supply and demand, and thus they not only make themselves heard, but in some cases dictate their own terms and carry their points by well organised threats, whereby the jobbers and heads of departments have to bow to their wishes, and thus they are at times masters of the situation. I am strongly of opinion that they are well able to protect their own interests and no further legislation is needed for them beyond what exists at present. I would further recommend that there should be a dispensary in each mill in charge of a competent L. M. & S., together with a compounder, to treat the mill-hands daily in cases of sickness. Besides these well organised dispensaries, at our mills we have a number of ambulance brigades, whose services are of great use in case of accidents to render first aid; of course, they should be optional, and mill-owners may adopt these suggestions of their own accord. This company has also schools for half-time children, who are taught elementary knowledge during certain hours of the day, though attendance is not compulsory. Some of the best managed mills do carry out these schemes for the benefit of the mill-hands voluntarily, and I hope that all the other mills may be requested to carry out the above suggestions. I am inclined to believe they will be adopted by all the mill-owners, as being of mutual benefit to the employers and the employed. The three suggestions to be approved and voluntarily adopted by the mill-owners are as under:—

(*a*) Free housing of the poor near the mills.

(*c*) Free dispensaries to be kept up for the hands.

(*b*) Free elementary education to be given to halft-ime children during certain hours of the day.

Year.	No. of days worked over 12½ hours.	Average daily number of hours. H.	M.
1897	90	11	54
1898	91	11	45
1899	89	11	50
1900	(stopped for erection of new engine)	11	0
1901	90	11	50
1902	103	11	56
1903	92	11	53
1904	91	11	56
1905	91	11	53
1906	92	11	49
	829	117	46
	General average	11	46

Oral evidence.

Witness stated that he had been connected with the industry for 32 years. He was a weaving master for 20 years. His mill worked from sunrise to sunset, and had no electric light. He approved of this mode of working, for although the longest hours came in the hottest part of the year, yet it was also the healthiest time for the operatives who did not work continuously. The cold weather was the unhealthy period for the operatives who did not leave the mill so often during this time of the year on account of the cold. There was no perceptible difference in the health of the hands, comparing the hot with the cold weather. The longest time his mill had worked was in June 1906, from 5-53 A. M. to 7-20 P. M. The shortest day in December was 11 hours and 3 minutes, and the average time for the year, exclusive of the half-hour interval, gave a working day of 12 hours and 5 minutes. He paid good wages, and the men did not leave for the long-hour mills. He did not think that the hands had improved in skill, and the greater production was due to the improvements in machinery. When he became manager of his present mill, he introduced several changes which increased the total output, still the weavers demanded an increase in their rates of pay while high prices for food and houses continued. They struck work for a week. Witness finally had to give way. Some years ago he tried to induce women to work on the looms, but the experiment was not a success, as males and females did not like working together. Women were best at winding and reeling, and there was also the caste difficulty to be got over. There were no low caste men in the weaving shed. The present restrictions on the hours of labour of women were not the cause of their not being employed more largely. He made his experiment before the introduction of the present Factory Act, but the women did not appear to be skilful enough. When a man applied for work, his caste was enquired into. Caste, in fact, was a great consideration. The hand-loom weavers were Mahomedans. He knew *mahrattas* who were hand-loom weavers. He had not tried Mahomedan women at the looms, but the women always had their household duties to perform. Witness was of opinion that the idling habits of the workers were partly connected with the questions of temperature and ventilation. If it was cold outside, then they did not want to go out so much, and they remained more in the mill in the cold weather than in the hot. He considered anything over 13 hours too long a working day, and thought it must affect the physique of the operatives. The rates of pay differed in Bombay, and if a manager said that his men were going to other mills, it might be because he was paying a low rate of wages. He was of opinion that any evasion of the law detected by the inspector should be reported first of all to the manager of the mill, who should have a chance of explaining and rectifying matters. It was impracticable to have a standard of purity of air, because the men themselves closed the windows. He considered that the children were properly taught in his

school. They received an elementary education; the suggestion that they should be taught on the kindergarten system was very good. He objected to the "young persons" class, which would create confusion; he thought that the boy of from 14 to 16 years was just as able to work for 12 hours as an adult. Mr. Sakharlal.

Witness No. 50.

Mr. John Taylor, Bombay.

I am the manager of the Elphinstone Mills. We employ about 1,361 people as stated below:— Mr. Taylor. *Written evidence.*

928	men.
251	women.
106	boys and girls full-timers.
76	„ „ half-timers.
1,361.	

Our mills work from 5-30 A. M. to 7-30 P. M. Half an hour at noon is allowed for recess. I am of opinion that these hours are too long. It must be admitted that the work-people spend a lot of time at the latrines and having their food, fetching drinking-water, &c. So long as the hours are so excessive, we can only expect that the work-people will spend much time away from their machines. It is impossible for any man to attend to his machine from 5-30 to 12 without a break, and then come on again from 12-30 P. M. to 7-30 P. M. Therefore I should say, in connection with the question whether the working hours of adult males should be limited, if a boy of 14 years of age is to be considered an adult, the reply is "yes." But I would prefer the special class of young persons: this class to consist of women and boys and girls between the age of 14 and 18 or 20, if necessary. I think if this special class is created there will be no necessity to limit the hours of work of adults, as there will be sufficient "young persons" to regulate the hours during which the machinery works. I would recommend a day of 12 hours from 6 A. M. to 6 P. M standard time, with a recess of ½ or 1 hour at noon, and for Saturday 6 to 3 P. M. The time from 3 P. M. to 6 P. M. on Saturday to be used for cleaning all machinery, and to be compulsory. All Sundays to be regular holidays; in addition, a reasonable number of days in the year should be allowed for holidays, say about 10 or 12, instead of the one day allowed at present. I do not approve of the proposal to fix the working hours from 5 A. M. to 8 P. M., provided the operatives do not work more than 12 hours in any 24. If 12 hours is to be the maximum, why not fix the proper times for starting and stopping? Women ought not to be employed on night work in either mills or gins. I think the age for a child to begin work ought not to be less than 10 or 11 years, but it is very difficult to tell their ages. I suppose we shall in a few years be able to obtain certificates of birth; then it will be advisable to make the production of certificates compulsory, and these certificates will also be useful to prove the age of young persons, when they reach 18 years, as in English mills. With regard to elementary education for half-timers, I think employers should provide it, because it is to the employers' interest to make his child workers better able to understand their work as they grow up. It is very necessary to keep the mills clean. I would recommend that the law make it compulsory to clean the mills every Saturday, all at one time, between the hours of 3 and 6 P. M. Also all mills ought to be limewashed once each year. Discretion should be allowed to the local inspectors and to individual employers as to how the various mills should be ventilated, because it will be difficult to fix a standard to suit all cases. Pure water should be used for the purpose of humidifying. Latrine accommodation as at present would be sufficient if urinals were insisted upon, and I think they ought to be.

Witness stated that he had several years' experience in England, six years in Ahmedabad, and three years in Bombay. He had the electric light in his mill, and worked from 5-30 A.M. to 7-30 P. M. (Bombay time). These hours were too long. He personally favoured 10 hours, but as that was not practicable at present he approved a 12 hours' day, which meant 11½ hours' actual work. With the shorter day he thought that the men would improve in their work, but they would not take less wages. With the proposal for shorter hours he coupled the compulsory education of children; the employers and the municipality should provide the schools. He favoured a start being made, similar to the system in England, and in a few years they would be able to arrive at an educational standard. The Municipality and the mill-owners could provide the schools assisted by grants-in-aid from Government. He would not have the schools inside the mills. In his opinion the men idled for 1½ hours each day, including the interval. He thought that the Ahmedabad operatives were better than those in Bombay in physique, but were no better in skill. The Indian lad of 10 or 11 was as sharp as the English lad of that age, but the former fell away at 15. He attributed this to the lack of education, but it might also be due to the fact that they then arrived at the marriage age. He did not consider that the youth of 14 was too readily passed by the doctor, but at present age was purely a matter of assumption. He agreed with the creation of the proposed "young persons" class, which would solve the working hours problem. Boys and girls needed protection, but the adults did not. Ever since the "young persons" class was instituted in England in 1847, it had worked well, and he thought it would do so in India, if coupled with education. If the law said 12 hours for adults, there would have to be exemptions for certain kinds of labour which necessarily involved overtime, while a working day of 12 hours for "young persons" would overcome the difficulty of exemptions. He was in favour of legislation fixing a definite working day for all children, young persons, and women. If they fixed the 12 hours for "young persons" indefinitely at any time between 5 A. M. and 8 P. M., they would find that these "young persons" would be working more than their 12 hours. This was the

Mr. Taylor.

experience they had of the first 10 hours' bill in England, and the special Act of 1850 was passed to prevent it. The "young persons" class must have specially defined hours, and there must be no margin of time allowed. He thought that the creation of a "young persons" class between the ages of 14 and 16 would not affect the weaving factories but it would if the age were 18 or 20 in place of 14 to 16. The "young persons" would be about 25 *per cent.* of the whole mill staff, and women about 20 *per cent.* Women, young persons, and children would make up fully 55 *per cent.* There was no reason why definite hours should not be fixed. If a 12 hours' day be decided on, electric light *must* be used more in the cold season, as it is in Lancashire, where the variation in the length of the day is greater than in India. The fixed hours might be 30 minutes earlier for Calcutta side than for Bombay, if standard time is fixed throughout India. He would make the Sunday holiday compulsory, and the other holidays could be reduced to about twelve in the year. His mill was short-handed, and he considered this was due to the long hours at night. After two or three very long days' work an operative was more inclined to rest in the morning than to get up and go to work. He believed in cleaning the machinery every Saturday afternoon, and would stop all mills between 3 and 6 for this purpose. In Lancashire the cleaning is done on Saturday morning, and the mills are closed at 12 o'clock till Monday. This is a good custom. With the electric light the operatives stayed more inside the mill, and paid more attention to their work. In England they would have three men looking after a pair of mules and 2,200 spindles, whereas in India there would be seven men for two mules and for 1,400 to 1,600 spindles. A better quality of cotton was used in Lancashire, and this was one reason why fewer men were wanted. It was harder work with inferior cotton than with good cotton. The men had not complained to him about the long hours. If the hours were reduced to-morrow the production and wages would fall, but as time went on both would improve. The men would want the same wages as in the longer hours. A great deal depended upon educating the children, and 20 years would see a great change for the better.

Witness No. 51.

Mr. T. Baptist, Bombay.

Mr. Baptist. *Written evidence.*

I represent the Morarjee Gocouldass Spinning and Weaving Company, Limited. The number of men employed at the present date is 1,739 and 343 women. The factory has worked from January, 1898, to March 9th, 1903, for 1,502 days, on an average of 12 hours *per* day; since March 9th, 1903, when our mill was equipped with electric light, we have been working up to date for 1,495 days, at 13 hours daily. We turn out $\frac{1}{8}$ oz *per* spindle *per* day in the 13 hours working more than we did in the 12 hours' day: this is based on 20*s.* average production. I consider one week's latitude should be allowed for a child or adult employes to work in a mill pending his presentation for examination by the certifying surgeon. If half-timers have been certified as over 9 years, and if any one of them continues to work in the same mill for 5 years more, he should be considered as an adult, or full-timer. This can be ascertained from the counterfoil of the certificate supplied to the child, and the copy in the mill book; therefore there is no necessity for re-certification. To prevent half-timers from working stealthily as full-timers is a difficult matter. My experience for the last 30 years, especially since the Factory Act came into force, has shown me the great difficulties one has to encounter. Even the establishment of a school did not succeed, as the jobbers will take half-timers to work as full-timers, in spite of all precautions, when the supply of hands is short, when fever and small-pox are raging, and, worst of all, when the marriage season commences. For this reason I had to give up half-timers and employ only adults. I am not in favour of creating a separate class of young persons; if any such class is created, it will interfere with the working of the mill and cause a lot of confusion. I should say it would be preferable to fix the maximum hours at thirteen by law, with half an hour recess at noon, and to leave each individual mill-owner to fix the time for the commencement and termination of the day's work, as circumstances permit. I don't approve of inspectors being brought out from the United Kingdom. Retired mill managers, or such men out of employment, and with Indian experience, would be suitable persons, as they are conversant with the habits and usages of the people, and with the labour conditions. I don't think any stringent law should be decided upon: the present one is in my opinion quite sufficient. The working hours should not be limited for male adults The engine should be stopped for half an hour between noon and 2 P. M. I don't see any reason to impose any limitation of hours when there are shifts. The employment of women at night should be prohibited by all means. Nine years is a proper minimum age for children, and certificates of both age and fitness should be required, but not for half-timers about to work as adults. Sets should not be prescribed by law: let this be settled by the employers. The provision of education should be optional. Non-working children should not be allowed to enter the mill. A standard of purity for air may be fixed; standards for moisture and water are not necessary. The present standard of one latrine seat for 50 workers is all right. Separate urinal accommodation should be insisted on. It is not necessary to prescribe that doors should open outwards. The administration of the Act should be uniform throughout India.

Oral evidence.

Witness stated that he had been connected with the industry for 30 years. In his opinion the production *per* hour was about the same in the long as in the short days. He had always worked the mill for 13 hours, excluding the half-hour interval, namely, 5-30 A. M. to 7 P. M. He thought that the operatives could work well enough for that period, and they did not complain of fatigue. To a certain extent he considered that the mill operatives as a class had improved in skill, but so far as his mill was concerned, they had the pick of the hands. The operatives knew they were well treated there, and so would not change. For instance they were always paid by the 20th of the month. The owners counted the working day as 12 hours, and the extra hour was overtime. Consequently the day worker received four days' extra pay *per* month, on account of this odd hour, and the piece-workers were allowed two days extra for night work in addition to the extra money they earned as piece-workers. These rates were paid all the year round, and they meant that if

a man earned Rs. 12, he received Rs. 13, on account of the overtime. If the hours were reduced to 12, his earnings would be affected. Since 1903 the daily wage had been increased in his mill by $\frac{1}{12}$th. The weavers were fairly industrious, and a good man on two looms could earn Rs. 36. The average two-loom hand earned Rs. 18, and the one-loom hand Rs. 12 *per* month. A good spinner in a mule mill could earn from Rs. 34 to Rs. 35 a month. He had given up employing half-timers. Formerly he had a school, and the jobbers would go to the school and take out as many children as they wanted. The school in the mill was a mere blind. The child received no extra wages, and was forced by the jobber to work when he—the jobber—was short of hands. This actually went on in the mill, and so witness stopped the school. He considered that the present system of distinguishing marks prevented impersonation. A young adult could earn Rs. 13 a month, but the average wage, including overtime, was Rs. 11. He thought the lads of 14 to 16 could work a 13 hours' day, as they were only actually at work for 11 to 11½ hours. An interval in the morning for meals would be of no use. The men could not all have their food brought at one time, and they would still eat their meals at their own times. Directly the midday interval arrived, the men rested but that did not necessarily mean that they were tired. In his opinion there was as much idling when working by the electric light as before. The hands came early to work, sometimes an hour before the proper time, and were anxious for the mill gates to be opened. They were not, however, reluctant to leave at night. The majority of the men spent one and half annas a day in drink; he did not think that the men necessarily provided the jobber with his drinks, although the jobber expected a certain amount of perquisites. He objected to a fixed time for the half-hour interval, and preferred to leave it to neighbouring mills to fix their own time. He had workmen who had been in the mill for 30 years. There was a pension fund in connection with the mill. The elderly men retired to their country to live on land bought out of their savings. Mill hands, generally speaking, were a healthy class, and he had detected no signs of deterioration. The young persons' class would create confusion, and such persons should be allowed to work for 13 hours. If their hours were restricted to 12, then that would absolutely fix the working hours of the mill. It was difficult to say whether mills could obtain adults in the place of the "young persons," but he personally should do his best to get adults. In his mill the young adults between 14 and 16 years of age formed 25 *per cent.* of the workers. He allowed no children at all in the mill; it would not pay the mill to provide a nursery. Children bringing food were not allowed to enter. Women who are nursing babies are allowed to go home for this purpose two or three times a day.

Mr. Baptist.

Witness No. 52.

Mr. Damoder Luxmidas, manager of the Khatau Makanji Spinning and Weaving Company, Limited, Bombay.

Mr. Damoder Luxmidas. *Written evidence.*

I represent the Khatau Makanji Spinning and Weaving Company, Limited, including the bleaching and dyeing house. 1,284 men and 275 women are employed in the mill: there are 240 men in the dye house. No children are employed. The average attendance is 1,799 as against 1,950 required, *i. e.*, nearly 8 *per cent.* less. From the beginning, our bleaching and dyeing house has been working from 7 A.M. to 5-30 P.M., as is the case with such dye houses in Bombay. Our mill was working from sunrise to sunset till June 1905, and then till 7 P.M. The average actual hours are 12¾ nearly from 1905. For about 4 months in 1905 we worked 14 hours. The production *per* spindle *per* hour is as under—

Mule 20s	0·42 oz.,	while working 14	hours a day.
	0·41½ oz.,	„ 13	„
	0·41 oz.,	„ 12	„
Ring 30s.	0·52 oz.,	„ 14	„
	0·49 oz.,	„ 13	„
	0·52 oz.,	„ 12	„

Moreover, it depends on the quality of cotton used. The longer the work the less the wastage in my opinion. At least a fortnight should be allowed to children to work, pending examination for a certificate of age. The present arrangements for medical examination are in my opinion satisfactory. To prohibit half-timers working as adults, unless medically certified as physically fit for full-time work, will not be practical or feasible. This will make hands leave one place and go to another, where they will be allowed to work as adults without such a certificate. I am not in favour of the suggestion for the creation of a class of young persons, as in the United Kingdom; this would affect the economical working of the factory. If work is to be limited it would be preferable to fix a maximum number of hours, leaving it to the discretion of each individual employer to settle the time for the commencement and termination of the day's work. I do not approve of the suggestions that inspectors from the United Kingdom should be obtained for factory work in India or that they should be trained there. It is advisable to allow some few workpeople to work on holidays to assist in repairs, &c. The period fixed for notices of closing days should be reduced from 24 hours to 2 hours. As the health of mill-hands is more affected by their poor houses than by working in the mill, they should be provided by the Municipality or Port Trust with suitable lodgings at a reasonable rent. There should also be a separate hospital for these people provided by Government.

If the Government wants to enact a labour law it must be for all alike, and not only for factory and mill people. If it only applies to factory hands, they will prefer to go elsewhere, where they will have a chance to get more work and money. All the hands are accustomed to take their food, smoking, &c., in the working time, and if this be taken into consideration, they actually work only 10 hours. Limitation of the hours of labour will increase their hardships in such a critical time, when food and houses are so dear. It is advisable to postpone this measure till a better time comes. It is always found that there is more wastage in starting time than during the whole day,

Mr. Damoder Luxmidas.

and if long hours are worked the average of this starting wastage will be covered by long running. If the hours be reduced, the workpeople will be enticed to vice and drink, being uneducated. If Government insists upon lessening the time, it would be advisable to have late hours for starting and closing. Working hours of adult males should not be limited. In my opinion the physique of workers is not affected by long hours. On the contrary they restore their health, as they do not get time to drink and engage in vices. If it is found necessary to limit hours, I think 13 hours are reasonable, and that the engine should be stopped for half an hour between noon and 2 P. M. I do not think it advisable to have a special class of workers intermediate between the half-timer and the adult. The employment of women at night should be prohibited. The present limit of 9 years for children is quite right. A certificate of age should be required. Elementary education should be given by the Municipality or Government, in the mill locality during the day, and for some hours at night. A rule prohibiting non-working young children from accompanying workers is not necessary, as at present they are not allowed. Testing samples of air is not advisable. A standard of moisture is also not necessary. A standard of purity for humidifying water is not required. Latrine accommodation of one seat for every 50 workers is more than enough and need not be raised. Very few separate urinals are necessary. It is not necessary that all doors of working rooms shall be hung so as to open readily outwards as now all the doors and windows are such that they can be opened and shut as required by the workpeople. No further precautions for fencing machinery are necessary. Arrangements should be made to secure uniformity in the administration of the Act throughout India. The present inspectors are quite sufficient.

Oral evidence.

Witness stated that he had been for 31 years in the industry. He started as storekeeper, and had no practical experience in spinning or weaving. Witness engaged the hands. He thought that the mills should be allowed to work for 13 hours. The "young persons" class was not required, and if it was desired to shorten the day beyond all doubt, then he would go straight for the restriction of adults' hours. He had worked out the following figures showing the relative waste in the short and long working days:—*Spinning.* In March 1905 with a 12 hours 5 minutes' day the waste, actual, was 2·46 lbs. *per cent.*, and in 20s 2·10 *per cent.* In October 1906 with a 13 hours and 5 minutes' day the waste, actual, was 1·92 *per cent.*, and in 20s 1·78 *per cent.* In June 1905 with a 14½ hours' day the waste, in actuals, was 1·86 *per cent.*, and in 20s 1·72 *per cent.*—*Weaving.* In March 1905, with a 12 hours and 5 minutes' day, the loom waste was 8 81 lbs. *per cent.* In October 1906 with a 13 hours and 5 minutes' day the waste was 7 25 *per cent*, and in August 1905 with a 14 hours 10 minutes' day the waste was 7 02 *per cent.* In his opinion the health of the operatives improved with long hours, because they were then confined for a longer time in the mill and had fewer temptations to spend money on drink. The hands spent 10 *per cent.* of their salary in drink. The school for children had not been a success. They did not now employ children, as they found that the children worked in two mills. When the mill closed on Sunday, the hands always took Saturday or Monday in addition. The hands always took four holidays extra each month, and they went to their country once or twice a year. He used municipal water for humidifying. For purifying the air they had ridge ventilation and windows, some of the latter being always kept open. The workers in the bleach and dye work received higher pay than the mill operatives. From the point of view of the mill manager he had no objection to the restriction of the hours of labour. In his opinion there ought to be a hospital reserved for mill operatives, and it could be endowed jointly by Government and the mill-owners. The operatives would object to live in *chawls* owned by the mill, because they would be liable to be found by the jobbers when they absented themselves.

Mr. Keluskar. *Written evidence.*

Witness No. 53.

Mr. K. A. Keluskar, Secretary of the Maratha Aikyeckhoo Subha, Bombay.

The working hours of adult males should be limited because the physique of workers has been greatly affected by long hours. It is not desirable that a person should be obliged to work long hours without any kind of family or social comforts to indulge in, and this they can hardly get when they return home quite exhausted and worn out. The suffocating, impure and artificial atmosphere in the factory tells on their constitution, and the further strain of long hours is cruel and inhuman. Even 12 hours' work is trying enough, and undermines the constitution of adults and young persons very perceptibly. Stout and sprightly youths become gradually emaciated and lean as they continue working in the mills, and as years roll by, their stamina gives way, and they suffer from general debility and slow fever which sometimes becomes so unbearable that they have to quit work and go to their native place to recruit their health. This is the reason why mill-hands are not regular in their attendance, and sometimes absent themselves for months together from their work. The fact that they waste two or three hours in loitering about in the mill compounds is largely due to the emaciating effect of their work in unhealthy air. It cannot be attributed merely to their ingrained habit of shirking work, when it is borne in mind that this waste of time entails heavy loss to themselves. It is also an observed fact that the progeny of the mill-going population is stunted and short-lived; and it is feared that it will gradually grow weaker, which would be a heavy blow to our mill industry. No efforts should, therefore, be spared to stop this evil. The cry of the mill-owners is that there is at present a paucity of mill-hands. This is mainly owing to the fact that this kind of labour is not at all popular. Mill-hands who quit their work owing to their shattered health do not like to return to it, and are willing to work elsewhere even for considerably lower wages. But on account of their extreme poverty, and the want of openings elsewhere, they are compelled, against their will, to return to mill-work. One is sure to find a number of such weakened mill-hands in every village doing agricultural or other work, and satisfied even with scanty fare. In short, sheer necessity alone compels them to resort to the work in mills. If these have been the general effects upon the labourers working in mills during the past years, it is but natural that worse effects will be produced if they are continually compelled to work more than 12 hours. This latter circumstance is sure to make the

mill industry more unpopular than ever, and the present cry of scanty supply of labour is mainly due to it. It can be safely stated that this cry was not so universal before the mania of working mills for long hours caught some of the greedy mill-owners; and if this state of things be allowed to continue for some time to come, this cry will increase to the detriment of the mill industry. As to the decided deterioration of the physique of the mill-going population, one has only to compare their constitutions with those of their relations who do some other work which is not so paying as mill-work. One who has opportunities of moving amongst them cannot but notice this vivid contrast. No adult labourer should be allowed to work more than 11 hours a day; and this limit should be fixed by law. Looking to the deteriorating effect of the artificial and impure atmosphere in the factories, and the enervating climate, it is not desirable that labourers should have to work more than 11 hours. It would be a fortunate circumstance if the hours were fixed less even than 11. But as the mill industry would suffer greatly if the hours were shortened still further, we have to put up with this necessary evil. If the number of hours be fixed at 11, there would be no deficit in the quantity of production, inasmuch as the labourers would in that case waste less time in loitering about in the compound. They will be anxious to turn out sufficient work in the limited time at their disposal, as they cannot afford to take less wages. Besides, the very fact that they will be let off earlier will encourage them to work harder and more regularly. Recourse must be had to law for restricting the working hours, as the owners of factories will never of their own accord limit their working hours, inasmuch as they have to compete with foreign trade, and hold the opinion that longer hours of work mean a larger production. Business men are not humanitarians, and they will never be moved with pity for the lot of the labourers, or set any limit to their working hours. If one here or there did, he would soon have to give up the idea, and follow the general custom, if he wished to hold his own in the intense competition. Even supposing that these factory owners come to some understanding among themselves, it is not possible that they will long act up to this resolution, unless some external pressure is brought to bear upon them. They are free agents, and can set aside any decision as soon as they see some gain. The labourers themselves are quite helpless in this matter. They are obliged to accept any terms their employers offer The faculty of combination has not yet been developed in them, they being illiterate and improvident as a rule. So they cannot realise their own position, and combine to dictate to their employers their own terms. Extraneous help alone will stem the evil. It is argued that Government interference would entail a heavy drag upon the industry. But when one brings to mind the heavy loss which mill-owners have to put up with on account of the irregularities and incapacities of mill-hands, such interference will not in the long run be detrimental to the industry, but it will on the contrary help its growth, inasmuch as it will stop the slow process of physical deterioration and consequent short life and sub-normal multiplication of the mill-going population. This interference will only be temporary inasmuch as the need for it will gradually disappear in proportion to the spread of education among the masses. Even in England, where the labouring class is not so illiterate and improvident, and where there are various sorts of labour combinations, the eight hours' movement has been set on foot, and some of the well-wishers of the labouring classes have been seeking the help of the law. How much more is interference desirable, then, in the interest of the Indian labourers, who are very backward in every respect? It is further argued that if the mill-hands find themselves worse off, they should either cease working in mills, or go in for strikes. The fact is that this class of labourers is extremely poor and cannot do without some kind of work At their native places they have hardly any means of support. Many of them were once agriculturists and tilled their own lands; but under the general economic change which came about during the last thirty years they are dispossessed of their lands and have to depend upon their daily wages. So they are almost helpless, and have to put up with all kinds of inconvenience in order to keep the wolf from the door. The mill-owners have been taking full advantage of their plight. The legal hours should be from 7 A.M. (Bombay time) to 6-30 P.M. (Bombay time), including the half hour for recess. The majority of mill-hands do not, and cannot, live close to the mills in which they happen to work. This means that they have to start from their residences about an hour before the mill starts. Consequently they do not get undisturbed sleep from 3 o'clock in the morning The anxiety to get to work in time is so great that they have to keep up and watch the time. Some have to be dragged out from their beds against their wish, and have to run to their work. As the *chawls* in which these mill-hands live are very crowded they cannot go to bed before 11 P.M.; and even if they manage to go to bed earlier, they do not get undisturbed sleep. So they cannot get even five hours' rest on the whole. This tells very much upon their system. If they are not required to attend early in the morning, they will get more sleep, and besides they could then manage to take a slight breakfast before they began work. This means additional energy. Moreover, many of them would not have to forfeit their wages for a quarter of a day, which they do if they attend even ten minutes late. Many men do not like to join mill-work mainly because of this difficulty of rising early and running to work before day-break They think that the morning snooze is preferable to any high wages. This is one of the principal causes why mill-work is so unpopular. This drawback will be removed if the mills begin work at 7 A.M. There is no objection to closing the mills a little late in the evening, provided they begin work rather late in the morning. For however early they may go home in the evening, they cannot go to bed before 11 P.M. for the reason mentioned above. Moreover, if the number of hours suggested above be fixed, they can leave work at 6-30 P.M, which is early enough for them to reach their residences. Besides, there will be no difficulty in working by artificial light as they will have to work for half an hour, or a little more, by lights during five or six months in the year. Although it is a fact that there is a decided deterioration of the physique of young persons attending mills owing to the illegal employment of persons between the ages of 12 and 14, it is not desirable to create a special class of workers intermediate between the half-timers and the adult in imitation of the English Act. The poverty of our people is so great, and the joint family system is so very binding upon each individual, that young men cannot afford to take less wages which they would get if their hours were restricted, for the simple reason that many of them have to support their aged parents and other relatives who solely depend upon them. The proposed measure would deal a heavy blow to our mill industry, since nearly half the number of mill-hands are between the ages of 14 and 18,

Mr. Kelushar.

Mr. Kelushar. and if their hours of work be restricted, the mills will have to work only for so many hours. That means so much less production, and besides many young men will not be willing to work in the mills as they will have no prospect of getting high wages. The experience in almost all mills is that half-timers are always anxious to be full-timers, and try to secure the necessary certificate. This fact shows how severe is the pinch of poverty which impels their parents to do so. Consequently it will add to the misery of the poor people and the industry will suffer also. It is objectionable to allow women to work in the factories after dark. The most desirable thing is that their work time should be so fixed that they are never required to leave house before sunrise, and that they reach home before sunset. This would save them from immoral ways, to which they are easily led, if darkness helps the dark minds. Many women have to attend to their culinary and other domestic work after they reach home from the mill, and some have children, whose comfort they have to look after. Certificates of both age and physical fitness should be required before children are allowed to work in factories. Parents and other relatives of children are anxious to see their children begin to support themselves, as they are too poor to feed them. So it is but natural that they do not look to the health or age of the child whom they put to work. Poverty makes them quite unscrupulous. Stringency of the law in this connection will entail no hardship upon anybody concerned, but the employers and the employés will be gainers in the long run. When half-timers seek to be admitted as full-timers certificates of age and physical fitness should also be required. On account of the poverty of the people they are anxious to get higher wages, and are naturally tempted to tell lies and evade the law. Mill-owners connive at this irregularity, as they gain by having more full-time workers. The law should prescribe that double sets of children should be employed. One set should attend the mills in the morning and work for three hours, and after half an hour's recess it should attend school kept by the mill-owner for three hours; after that the same set should work three hours more in the mill, and then it should be allowed to go home. The other set should come in and take up the work of the first set, when the latter gets recess and schooling, and work for three hours. Then this second set should get recess of half an hour and attend school for three hours. It would resume work when the first set is let off. In this way the machinery would not remain idle, and each set would get 6 hours' work—three hours schooling, and three hours off during each day. Every factory owner should be compelled by law to provide elementary education to mill-going children in his employ. This child labour is very profitable, and had it not been for the temptation of getting some wages, some of the children would be receiving schooling, to which their parents would put them for the sake of keeping them from loitering in the streets and falling into bad ways. The spread of education is greatly hampered by this industry in this city, and in many other towns where similar industries have been set up. To stem this evil the regulation about compelling mill-owners to keep a school on the mill premises at their own expense is earnestly needed. The little elementary education which these children will snatch is calculated to develop their intelligence and make them realise their duties; and some of them will perhaps develop some taste for reading. This will in the long run benefit the factory owners themselves since they will have a more intelligent and sober class of workmen. But in compelling the factory owners to provide free elementary education care should be taken to provide for Government supervision of such schools. They should be brought under grant-in-aid rules and inspected periodically by Government inspectors. It would be a sheer act of cruelty if non-working young children were prohibited from accompanying their elders. Many an unfortunate child is cut off in its infancy by the want of care of their mothers, whom necessity compels to leave their children in the nominal charge of some one. Some humane measure should be adopted which will relieve mothers from anxiety and keep the little unfortunate urchins in comfort within easy reach of their mothers. For this purpose it is quite desirable that nurseries be created in the mill compounds away from all dangerous and unhealthy parts. In these, children who must accompany their mothers should be kept under the management of one or two affectionate and elderly persons, and the mothers should be permitted to visit their children occasionally. Some provision ought to be made to help those who suffer from any accidents while working in mills. Mill-owners are generally apathetic to such injured persons. So Government should compel them to set apart some fund to help the poor people who have nothing to fall back upon when they have to remain without work for some time or for life. Mill owners should be asked to contribute in proportion to the extent of their industries towards the maintenance of special hospitals or special wards in the present hospitals for mill-hands. These should be under the direct supervision of Government officials, or municipal corporations. Mill-owners should be asked to co-operate in some feasible scheme for erecting cheap houses in the vicinity of mill districts, for the special use of mill-hands, with the Municipality, the Improvement Trust, and the Government.

Oral evidence. Witness stated that he was a *marhatta*, and came from Savantvadi. The society with which he was connected aimed at promoting education among the backward classes. The society raised funds, and some of the members went into the mill districts and lectured. He had been among the mill-hands for 20 years He had relations in the mills, and he came from a part of the country from which mill-hands were largely drawn. The elderly men retired to their native places, and could not return to mill work because their constitutions were usually shattered. Generally they had not saved anything, and they had to live by cultivating the soil. Witness maintained that mill employment led to deterioration of health and physique. He could not account for the low death rates of the Kolaba and Ratnagiri districts, seeing that all the mill-hands retired there after they were broken down in health by mill labour. In his opinion the mill-hands would willingly engage in other work if it could be obtained. The holidays which the operatives took each month were taken solely owing to the long hours worked. With shorter hours he anticipated more attention, more regularity in attendance, and improved skill on the part of the men. The society had been in existence for 24 years, and gave scholarships to boys, and distributed leaflets. It spent about Rs. 100 a year. There were also two lecturers who pointed out to the mill-hands the evils of drink. He believed that the nature of the mill work was such that the men were bound to take a stimulant. So far, the efforts of his society had led to no tangible results. There was no organization among the mill hands. He thought the men would rather start one hour later in the morning and go on for one hour later at night. With shorter hours

there would not necessarily be a decrease in production. He was not acquainted with the condition of the industry in Japan, but he had no wish for any legislation which would affect the Indian industry adversely. It was only those men who were in want of money that worked long hours; it was not because they liked the long-hour day. It was solely the necessity for obtaining money for the support of their families, that induced them to work long hours. He considered that the restriction of hours would be popular among the men. Mr. Kelkar.

Witness No. 54.

Mr. Bamanshaw Jamasjee Jambusarwalla, Ankleswar.

Mr. Jambusarwalla. *Written evidence.*

I represent the—

Bamamshaw Jamasjee Ginning Factory.

Do. Press Factory.

In my old ginning factory there are 28 men, 40 women and children; in my new factory 10 men, 30 women and 10 children. In my press I employ 35 men, 15 women and 10 children. Generally the factories begin work in January, and stop working in April; it depends upon the season. In the beginning of the season, when the arrivals of cotton are small, the factories work from sunrise to sunset, but when there is a rush of work, and the March shipments come nearer, we are obliged to work for 16 hours from 6 in the morning to 10 at night. These extra hours are for only 40 days at the most. In ginning factories and presses a person works for about 14 hours on an average, but they get a lot of rest during the time. The cleaning and repairing of the machinery take about an hour each day, and the changing of cotton and other excuses greatly reduce the actual working time. The operatives also pass much of their time in going about, smoking and so on. Deducting the rest and other stoppages the average actual working time comes to about 11 to 12 hours a day. In a press a person also works about 14 hours, but deducting the time when mixing, opening and other work is going on, the actual working hours are not more than 11 to 12. I do not approve of the proposal to bring ginning factories and presses under the Act in this district. Such factories work for only 60 to 80 days in a year, and out of these 80 days, 40 days are worked with overtime. The Broach season is very short. Labour is dear and very scarce, and men could not be found even if paid one rupee a day. The quality of Broach cotton is such that if it is left without ginning or pressing for more than a fortnight, and exposed to the sun, in which condition it is usually left, it is likely to deteriorate, and consequently not only the dealer will suffer, but the manufacturer will not get the same quality as he used to receive. I do not approve of the suggestion to prohibit women from working at night because—

(*a*) Broach is a district where labour is very scarce.

(*b*) The actual work of 11 to 12 hours in my opinion and according to my experience of 22 years will not tell upon the health of a working woman. If the Act is applied to all gins and presses, special provisions to modify the general law will be necessary

(*i*) Factories which work for not more than 120 days in a year should be allowed to work for 40 days extra time, *i.e.*, up to 16 or 17 hours a day.

(*ii*) Instead of one day in the week as a holiday, I am of opinion that two days together in a fortnight should be allowed, so that by stopping work for two days together, the aperatives will get a good rest and the boilers will be well cleaned. With a stoppage of one day the boilers are not properly cleaned, and workmen are sent into the boiler, or the side flues, when they are very hot, which is a hardship.

Some of the factories are deficient as regards fencing. I am of opinion that it will be very inconvenient to case the whole space between the drums, but it is necessary to case the couplings and the shafting if it has an open slot. I don't see any reason why women should be prohibited from working in front of the opener. If the cotton is well shaken before it is opened, I think accidents from stones being hurled from the opener will not occur. As regards fire, a special law should be enforced prohibiting the use of low class matches, because that is the only cause of fire in ginning factories and their compounds. In the last five years we have had no accidents except that a workman had his finger cut off by a machine. In my opinion the Factory Act is unnecessary in Broach for the following reasons :—

(*a*) the number of working days is limited;

(*b*) the actual working hours are not in excess of those specified by the present Act];

(*c*) labour being dear and the labourers being scarce, the owners of factories will have to suffer a great deal if the Act be enforced;

(*d*) the operatives do not suffer much in health by working overtime for so short a period;

(*e*) the general constitution of the operatives is good;

(*f*) home manufacturers would have cause to complain if the cotton is exposed for a long time, and deteriorates.

Oral evidence.

Witness stated that the ginning season was short and busy, because the March shipments had to be got through without delay. Labour was both scarce and dear, and so working by regular shifts was quite impossible. The men and women were paid by the day. The men were from the agricultural district, while the women were *karwas*, the sailor caste. Some presses worked from 5 in the morning to 12 o'clock at night, but generally the working day was 16 hours. The hands had practically a shift system among themselves, and relieved one another. There was not sufficient male labour available for a regular shift system, though perhaps women could be obtained in sufficiently large numbers to work two shifts. The pay was one rupee for the 16 hours' work; he had no experience of gins that worked longer than that period. 16 hours was the ordinary working day in ginning factories. The children received three annas a day. The

Mr. Jambusarwalla. adults worked about 14 hours out of the 16, and the children would probably work a similar length of time, because they were supposed to be at work during the whole day. These hours were too long for a child, and he had no objection to the hours for children being restricted, but the industry would be crippled if the freedom of the women was interfered with. The season lasted for 80 days, and at the conclusion of it the hands returned to their usual occupations. They were not mill workers, and the majority of them came season after season. The *karwa* women were thrifty, and might save Rs. 10 in the season. The men could save a good sum, but spent a considerable percentage of their earnings in drink. When the mill stopped every fortnight for two days for cleaning purposes, then the men drank to excess. A man earned Rs. 25 a month, and would earn from Rs. 60 to Rs. 70 in the course of the season. He could save Rs. 18 a month if he liked, but generally the money went in liquor. The long hours were the result of the scarcity of of labour, and he thought that if a greater supply of labour was forthcoming, then the owners could work shorter hours and still get the cotton pressed in time. The owners could not afford to pay higher wages, because even at the present rate it was difficult to make the gins pay, and it was essential to remember that ginning labour was not skilled labour like that in a mill. The men simply carried the cotton about the compound, and the women fed the gins, they remained in a sitting posture. For the purpose of securing the fencing of machinery, he agreed that gins should be brought under the Factory Act. Personally he would fence the couplings and the shaft, where there happened to be an open slot. The engine was always stopped when it was desired to clean the under-shaft of loose cotton. In his factory he had both an under and over shaft. There were no openers in Broach. Occasionally in a press an opener had to be used when some inferior cotton was mixed with Broach cotton, and if persons worked in front of the opener, they ran a certain amount of risk. This could be obviated by prohibiting women from standing in front of the opener, and one or two men could easily sweep away the fluff in a very short time. Sunday was not observed as a holiday. They stopped for two days every fortnight, and if they stopped on Sunday every week, two days would still be required for boiler cleaning and other purposes. There were no new gins in the Broach district. Sometimes the work went on to the end of April, and if the season was late, then he had known them not to finish before the end of May. The quality of the Broach cotton was such that it was likely to deteriorate by being left too long in the sun.

Witness No. 55.

Mr. T. E. Ratcliffe, Bombay.

Mr. Ratcliffe. *Written evidence.* I am the manager of the Western India Spinning and Manufacturing Company, Limited, in which the total number of hands employed is 1,300—1,020 are men, 251 women and 29 children or half-timers. The following table shows the number of days the mill worked over 12½ hours, as also the average number of hours worked in each year during the decade:—

Period.	Number of days worked over 12½ hours in each year.	Average daily number of hours worked in each year.
1897 November to October 1898	113	11·58
1898 „ „ 1899	94	11·45
1899 „ „ 1900	91	12·2
1900 „ „ 1901	115	12·3
1901 „ „ 1902	118	12 6
1902 „ „ 1903	123	12 0
1903 „ „ 1904	113	12 14
1904 „ „ 1905	157	12·27
1905 „ „ 1906	164	12·17
1906 „ „ 1907	113	11·58

The following table shows the effect of working days of varying lengths on production. The figures regarding waste are not available:—

Working days.	Production *per* spindle *per* hour of 10s mule.	Production *per* spindle *per* hour of 20s ring.	Period covered.
12 hours	·76	·46	One month.
13 hours	·77	·47	
14 hours	·79	·50	

I think two weeks' previous employment of children should be allowed before certificates for age and physical fitness are obtained. A half-timer desirous of working as an adult on full time ought in my opinion to obtain a certificate of age and physical fitness. The thumb mark of the employé on such certificate will be a check on the person producing the same. But special marks on the body should be carefully put on the certificate. I am against the creation of a class of "young persons," as a large number of persons above the age of 14 and under 16 are generally employed in every mill, particularly in the spinning and carding departments, as menders, tenters and doffers. If any such class is created, and their hours and labour restricted, it will mean practically determining the working hours of the whole factory. There are over 300 persons between the ages of 14 and 16 working in the factory I represent. I am of opinion that the hours of adult labour should certainly not be restricted, because it would be detrimental to the economical working of the factory. Strict rules as to ventilation and sanitation should be made in order that the health of the operatives may not be injuriously affected for want of the same. I do not approve of keeping a special register for young persons between the ages of 14 and 16. As far as spinning and weaving mills are concerned, female labour at night should be altogether prohibited. The minimum age of children, as at present prescribed, is quite proper, and needs no change. Certificates of both age and physical fitness are necessary before children should be allowed to work in a factory. Certificate of age for a half-timer is necessary before he should be allowed to work as an adult. It is the practice already, where children are employed, to employ them in sets, and therefore this does not require to be prescribed by law Elementary education to children in my opinion is necessary, but not at the expense of the mill-owners. For the purpose of fixing a standard of purity for humidifying, I think tank, well or pipe water might be allowed to be used. The provision of one latrine seat for every fifty persons is amply sufficient; and, as far as my experience goes, I have never seen workmen feeling the want of any more accommodation. Separate urinals are advisable. With respect to the fencing of machinery, I am of opinion that every precaution is taken for the safety of the employé. I think arrangements should be made to secure uniformity in the administration of the Act throughout India. **Mr. Ratcliffe.**

Witness stated that he had been in India for nearly two years, and had a long experience of the cotton industry at home. He had prepared the following statement: calculation for a 42" loom running at a speed of 160 picks *per* minute, and making long cloth of the following particulars:—36", 37½ yards, 52 reed, 50 picks, 22*s* warp, 36*s* weft, 9 lbs. (1) The actual production from this loom when kept properly working for a period of two hours, under ordinary conditions, including the drawing in of all broken warp threads, is 2 lbs. 6 ounces. (2) The actual production obtained from the same loom, under present conditions. in two hours' working is 1 lb. 12 ounces. (3) The calculated production of the same loom, without any stoppages whatever, for a period of two hours, is 2 lbs. 8 64 ounces. (4) The calculated production of the same loom, with 10 *per cent.* stoppages, which is rather more than what would obtain in a well managed English mill, is 2 lbs. 4 ounces. This width of loom in England would run at a speed of at least 185 picks *per* minute, and this would give a production of 2 lbs. 8 ounces, with 10 *per cent.* stoppages. Witness obtained the 2 lbs. 6 ounces by keeping the loom going under direct supervision, and preventing any unnecessary stoppages. The 1 lb. 12 ounces was the result of leaving the man to himself and taking the production for 2 hours. The weaver did not know that his production would be measured. An average for a week's work was taken, and came to about the same. This showed that there was 26 *per cent.* less production when the operatives were working the looms than might be expected. On an average an English workman would attend to four looms and an Indian to two. In spinning the actual production of 22*s* warp for a day of 12 hours was 5 83 ounces, compared with a possible maximum production of 7·1 ounces. On the theoretical figures witness allowed 5 *per cent.* for stoppages. The 5·83 ounces were ascertained over a period of two weeks for the whole mill. With the same counts in England he should say the production would be about 7 ounces. The actual production in India was 18 *per cent.* below the theoretical amount. When spinning 20*s* he estimated they required two and a half hands in India to one in England. It was difficult to explain why the rate of production increased when the hours of work increased, and the conclusion he had come to was that the men idled as much in a 12 as in a 13 hours' day, but that in the last hour of the longer day they were more attentive to their duties. Consequently the mill got more production in the last hour, which made the all round average higher. He considered that the Indian workman after 13 hours of work was far more sprightly than the English workmen after 10 hours. Witness did not care to express any opinion about the length of the working day. Witness gave the following percentages of absentees, taken over a period of one month, from the permanent hands on the books — blowing department 12 *per cent.* absent daily, carding 17 *per cent.*, frames 12 *per cent.*, mules 14 *per cent.*, rings 18 *per cent.*, doubling 70 *per cent.* and reeling 33 *per cent.* Witness admitted that they obtained substitutes, and so worked their frames. He had not worked out the net shortage. With the substitutes there was only an 8 *per cent.* shortage in rings from the manager's point of view. Witness had not taken a percentage of the absentees in weaving. They could not get sufficient hands for substitutes, and the mill was always short-handed. If the hours were restricted, he thought it would take a long time to become stricter with the men and he did not think the operatives would work more steadily in order to bring their earnings up to the old level. Six weeks ago the operatives had asked to be allowed to work an hour longer, namely, from 6 P. M. to 7 P. M. The agent agreed to work till 6-30 P. M., but this would not satisfy the men. The normal English working day was 10 hours, and the Indian 12 hours, 5 minutes. An English weaver watching four looms earned 26 shillings a week, and an Indian weaver watching two looms earned 5*s.* 4*d.* a week. He did not accept the principle in India that shorter hours and higher wages were more conducive to better work than longer hours and lower wages. The Indian workman need not always stop at his present standard, and if he were educated, witness thought that shorter hours might lead to an improvement of work. That was to say the operative would become more efficient as he became more educated. He did not consider the present generation of mill-hands absolutely hopeless, but they would not go to school even if their hours were limited to 12. If witness were a factory owner, he would not consider the weaving figures he had given as good. He should want more than 66 *per cent.* of the possible output. ***Oral evidence.***

Mr. C. N. Wadia.
Written evidence.

WITNESS No. 56.

Mr. C. N. Wadia, Agent of the Century Spinning and Manufacturing Company, Limited.

I represent the Century Spinning and Manufacturing Company, Limited, which employs about 2,475 men, 425 women and no children. The factory working hours have been as follows since the commencement of the mill:—

Year.	Number of days the mill has worked over 12½ hours a day.	The average daily number of hours for which the mill has worked throughout the year.	
		Hours.	Minutes
1899 ...	*Nil*	11	32
1900 ...	2	11	43
1901 ...	74	11	55
1902 ...	105	12	1
1903 ...	104	12	0
1904 ...	101	12	2
1905 ...	118	12	14
1906 ...	212	12	37
1907 ...	241	12	47

Statistics showing the effect of working days of varying length on the production *per* spindle are given below:—

Working days of average hours.	Production *per* spindle ring of 20*s*.	Percentage of waste.	Period covered by these statistics.	Remarks.
12 hours or under.				
11—20	6·96	No record.	6 months, October—March 1901.	Day light only.
11—20	7·27	Do.	Do. 1902.	Do.
11—20	7·27	Do.	Do. 1903.	Do.
11—25	7·27	Do.	Do. 1904.	Do.
11—20	7·18	16·99	Do. 1905	Do.
13 hours or under.				
12—25	7·33	16·24	Do. 1906.	Electric light.
12—40	7·49	15·74	3 months, January—March 1907.	Do.
12—34	7·09	No record.	6 months, April—September 1901.	Day light only.
12—40	7·42	Do.	Do. 1902.	Do.
12—40	7·29	Do.	Do. 1903.	Do.
12—35	8·44*	16·26	Do. 1904.	Do.
12—40	7·34	16 97	Do. 1905	Do.
13— 0	7 62	15·92	Do. 1906.	Electric light.
13— 0	7 40	18·48	Do. 1907.	Do.

* Believed inaccurate.

I think it will be necessary to prescribe some reasonable time limit within which the employé should be allowed to work, pending examination for a certificate for physical fitness. I consider 20 days would be a sufficient period. The compulsory attendance of a medical inspector once every three weeks at every mill would secure all the medical examinations required by law. If the inspecting medical officers were to agree as to what constitutes physical unfitness, there ought to be no difficulty in safeguarding and preventing half-timers who are refused certificates as adults in one factory from working in another factory as adults, particularly if, as contemplated, full-time medical inspectors are appointed, and a special staff created for indexing and classifying thumb impressions. The probable number of "young persons" between the years of 14 and 16 constitutes about 15 *per cent.* of the total number of mill-hands. I am altogether against the creation of a class of "young persons", and I believe if such a class were created that it would do no possible good to the factory workers, and would lead to endless difficulties between mill-owners and the inspectors. Assuming that it is eventually decided to restrict the hours of adult labour, I think it would be preferable to fix a maximum number of hours, leaving it to the discretion of each individual employer to settle the time for the commencement and the termination of the day's work. I think restricting the number of hours of labour would be quite enough. Definite time limits in certain trades would be quite impossible. I do not think that the chief inspectors for factory work in India should be obtained from the United Kingdom. The under-inspectors I think with advantage might be so obtained, so that when their time came for the higher post they would be well acquainted with special habits and requirements of the east, which no amount

of western experience can inculcate. I am of opinion that the physique of workers has not been affected by the hours worked during my experience of 20 years of the cotton trade of Bombay. Prevention is always better than cure, however, and as no adult can physically work more than 12 hours in 24, I am of opinion that seeing that there is no public opinion or unanimity amongst the workers, they should be guarded against themselves by limiting their hours. I think that the limit should be 12 hours of work in a day of 24 hours, and it would be advisable to prescribe— Mr. C. N. Wadia.

(1) that, except when working by shifts, the legal working hours should be 12 for adults;

(2) that the engine should be stopped for half an hour between noon and 2 P. M.;

(3) I do not think any limitation as to working hours should be imposed on a factory working on the shift system, provided no adult male is allowed to work more than 12 out of every 24 hours therein.

As far as I am aware, there has been no illegal employment as adults of persons between the ages of 12 and 14, and I do not think that any physical deterioration has taken place which would warrant the introduction of the so-called "young persons" class, as under the English Act. I think that the employment of women at night, that is, after 8 P.M., cannot be too stringently prohibited. I think the minimum age at which children should be allowed to work in factories should be raised to 10 years. I think the certificates of both age and physical fitness should be required before children are allowed to work in factories. Similarly, when children who have hitherto worked half-time are allowed to work full-time as adults, I think that certificates of both age and physical fitness to work full-time should be required. I think that children should not be employed except in sets and in shifts, and no half-timers should be permitted to work continuously more than three hours at a stretch without a cessation of work for another three hours. I do not think that factory owners should be obliged to provide elementary education at their own expense for children working in their factories. I hold that it is the duty of every Government to see that every citizen under its flag receives elementary education at Government expense. In a cotton factory there are no dangerous or unhealthy parts, and therefore no prohibition is required against non-working young children entering any part of such a factory on the score of health. I think it is quite unnecessary to test samples of air taken from factories in India, or to prescribe an analytical standard of purity for air, for the reason that all mills in India are fitted with opening sashes, whereas they are not in England. No special efforts are made to exclude cold air, as in English mills, and except in rare instances it is unnecessary to attempt a test of samples of air. I think it quite unnecessary to prescribe a standard of moisture for the air in factories. Moisture, due to Indian climatic conditions, can do no harm, I conceive, but heavy steaming or moisture created by steam should be limited at the discretion of the chief inspector. I think it quite unnecessary to create a standard of purity for the water used for humidifying purposes. In my opinion the standard of latrine accommodation should be as follows:—

Number of workers.		Number of latrines.
100 or less	... ...	5
200 do.	... ...	9
300 do.	... ...	12
400 do.	... ...	15
500 do.	... ...	17
600 do.	... ...	20
700 do.	... ...	23
800 do.	... ...	25
900 do.	... ...	27
1,000 do.	... ...	29

and for every 50 workers above the 1,000 one extra latrine. The difficulty connected with the number of latrines or urinals does not rest so much with the millowners as with the Municipality, who habitually shirk part of their work in removing the refuse. The provision of more latrine accommodation than above stated would be, I think, unnecessary. Similarly with urinals. It is the Municipality or that particular public body charged with the removal that causes trouble. At the present stage urinals, I think, are unnecessary; but where drains are available, there would be no harm in making them compulsory. It is quite unnecessary to prescribe that all doors of working rooms should open outwards. Whilst the mill is working it is very seldom that the doors are closed. No further precautions for fencing machinery are necessary in cotton mills. The inspectors err rather on the safe side already. I do not think there is any necessity to make any arrangements to secure uniformity in the administration of the Factory Act throughout India. I see no objection to appoint full-time medical inspectors of factories to assist the present inspectors in securing the due observance of the Act. Such inspectors should be paid by the Government an adequate salary, and should not be allowed private practice. They ought not to receive any remuneration in any shape or form from mill-owners.

Oral evidence.

Witness stated that he had had 20 years' experience of the industry. He had electric light in his mill, which since 1905 ran for 13½ hours. The average production *per* hour was not so good as in the shorter days, but the gross output increased. He found that if he did not work these long hours in conformity with other mills, he could not get hands, because they left him to go to those mills where they could earn more money. Witness had tried to shorten the working day, but the operatives themselves approved of long hours, and unless they were promised the same amount of pay as they earned in the long-hour mills, they would go to those mills, despite the shorter hours. If submitted to the test of longer hours and more pay, or shorter hours and less pay, witness was convinced that the men would be in favour of the former. He believed in restricting the working day to 12 hours, and he did not think that any man, however physically fit, could work continuously for more than 12 hours day after day without evil effects. In his opinion the actual gross output of a 14 hours' day was over that of a 12 hours' day, but the increase was not proportionate to the extra hours worked. His mill worked about 13 hours clear. Most of the men were on piece work, and for the extra time between sunset and the shutting

C. N. Wadia.

down of the engine the men on fixed wages received one and a half annas *per* day. Witness wanted to work only 12 hours, and his operatives threatened that if he did so, they would go to other mills. He had 20 neighbours who all worked long hours, and so in order to keep his men he had to follow their example. He did not think there was any thing to be obtained by working more than 12 hours, and if the number were fixed, the men would apply themselves with greater energy and spend less time idling in the compound. The present so-called 13 and 14 hours' day was a myth. He estimated, after allowing for legitimate stoppages, that each loom was only working for 10 out of the 13 hours. Witness promised to forward some statistics on this subject, showing the actual output of a loom compared with the possible maximum output. Taking the operatives as a class, he saw an improvement in their work, though during this time the machinery had also been improved. He was sure there had been no improvement in their habits of work, their idea being to earn as much as they could with as little trouble as possible. He considered that owners could get quite as much work out of them if the hours were limited to 12 as they now obtained in the 13 and 14 hours. If labour was wasted, as at present, then the owners would have to pay extra for the half hours in the cold weather worked by electric light under an average 12 hours day. They had three times the number of men required in an English factory of similar capacity, and even with this surplus of hands the owner did not obtain that efficiency at the machines that he was entitled to expect. He estimated that they did not get 60 *per cent.* efficiency as compared with an English loom, and their extra hands averaged seven *per cent.* Witness differed from the view that these extra hands served as a kind of unrecognised shift system, and that, therefore, the men were not tired after a 14 hours' day. Witness agreed with a more stringent medical examination for children, and thought that some boys up to the age of 14 were not fit for their work. They were, however, better employed in light work in a mill than in loitering about the streets. The hours of the proposed "young persons" class would determine the working hours of the mill. If the hours of women were increased, he did not think it would greatly benefit labour. Their mode of life and form of garment would prevent them from working in the spinning department with the men. Speaking generally, a boy of 14 was equal to a full day's work. He entirely disapproved of half-timers, and did not employ them. Witness did not consider a standard of ventilation necessary. The hands were away for about a month each year. Formerly they used to return to the same mill, but now they seemed to float about from mill to mill. Out of his 3,000 hands from 250 to 300 were always away, and he did not think they would be more regular in attendance even if they were assured of one day's rest in every seven. The men were not fined for casual absence; if they were, they would leave altogether. When labour was plentiful there were fewer absentees. The operative undoubtedly saved money and retired to his country. Some were in debt, chiefly those who drew small wages, and because they were improvident. The operative, as a rule, would live on half his pay. They also drank a little. Witness thought that a 12 hours' day would benefit the industry. He considered that the men would attain a higher standard of efficiency, and produce nearly as much, if not quite as much, as in the long hours. The knowledge that the operative would receive less pay unless he applied himself would be a stimulus to better work, and he considered that the men, in time, would appreciate the stopping-hour coming round quicker than usual. He would not give them extra time in the middle of the day; it was not the practice in Bombay to take an afternoon *siesta*. He had tried a breakfast interval and a longer midday interval, both without success.

Statement showing the number and percentage of hands absent in each month.

Year 1907.	Working days.	Total number of day-absences in the month.	Average number of hands absent *per* day.	Percentage of hands absent, on 3,200 hands *per* day.
January	25	7,271	290	9·06
February	25	8,357	334	10·44
March	27	8,383	310	9·69
April	25	7,114	284	8 87
May	27	9,546	353	11·03
June	26	7,686	295	9·22
July	26	8,196	315	9·84
August	26	6,784	261	8·16
September	26	12,075	464	14·50
October	27	10,798	400	12·19
November	25	8,604	330	10·31

Statement showing the loss of production, or efficiency of labour. Mr. C. N. Wadia.

Name of machine.	Engine run.	Less a fair allowance for doffing, etc.	Nett time the machine ought to run.	Nett production of machine if kept running properly.	Actual production.	Efficiency of machine.
	H. M.	H. M.	H. M.			
Scutcher	13 10	2 30	10 40	130 laps	100 laps	77%
Carding engine ...	13 10	1 10	12 0	225 lbs.	190 lbs.	84%
Drawing frame ...	13 10	4 0	9 10	1,600 „	1,200 „	75%
Slubbing frame ..	13 10	3 30	9 40	1,600 „	1,200 „	75%
Intermediate frame ...	13 10	3 0	10 10	1,300 „	1,100 „	85%
Roving frame ...	13 10	2 50	10 20	670 „	470 „	70%
Ring frame	13 10	0 25	12 45	170 „	155 „	91%
Loom 28"	13 10	2 0	11 10	88 yards	63 yards	72%
„ 40"	13 10	2 0	11 10	73 „	56 „	77%
„ 54"	13 10	2 0	11 10	61 „	41 „	67%

Witness No. 57.

Mr. C. Dorabji Panday, Bombay.

Mr. C. D. Panday. *Written evidence.*

I am the manager of the Emperor Edward Mills, worked under the agency of Messrs. B. D. Petit Sons & Company, in Bombay. There are 1,040 men, 174 women and 120 children working in this mill, with fluctuations in their number at various periods in a year. This mill has never worked overtime by artificial light. Thus there are about 135 days in which the mill works over 12½ hours during a working year of 310 days. The average for the whole year comes to 12 working hours *per* day. I believe it will be beneficial to the industry in general, and to the work people in particular, if the hours of work were limited by Government, as I believe the physique of the workers is affected by long hours. It will be advisable to limit the time of actual working by law. I would suggest the starting time of the mill be fixed at 6-30 and the stopping time at 7-30 (standard time)—in all 13 hours. This includes half an hour for midday rest, and allows for cleaning the machinery when the engines have to be stopped. It takes about six hours for cleaning in a month. This arrangement would give a clear working day of 12½ hours. The creation of a class of "young persons" will only create unnecessary annoyance both to the mill-owner and the work-people, without in any way benefiting either. In fact it will be a great hardship on the poor people as restricting their earnings. I do not believe that there would be any advantage in keeping a special register of all workers under the age of 16. Let the parents and mill-owners be the judges of the physical fitness of the youngest adults to work full time. I believe it is necessary to prohibit the employment of women at night. It will be a hardship on the poor parents of our work-people if the minimum age of the children be raised beyond nine. It is necessary to have certificates of age, and a good thing also to have one for physical fitness for children. The law, however, should be made somewhat elastic on the latter point, as there always will be a diversity of opinion regarding it. It will not be necessary to provide special certificates for children to work as full-time adults after they have worked as half-timers. The particulars mentioned in the original certificate should be detailed enough to indicate the age, etc, of the adult. It is always found convenient to work the children in sets when child labour is necessary for the time the engine works from morning to evening. To prevent the children from going to work in another mill on the same day it would be advisable to compel the managers to work the children in morning and evening sets. I believe it would be a very good step to insist upon mill-owners providing elementary education up to the age of fourteen, in as light a form as possible, without fixing any standard of examination at the end of that period. The employment of a teacher and the provision of the more essential materials appertaining to a school should be sufficient. The prohibition of non-working young children from accompanying workers to dangerous or unhealthy parts of factories could not, I believe, be successfully carried out in practice without creating unnecessary annoyance to all concerned. Notices in different departments, and strict injunctions to the heads of such departments, would be enough to prohibit this practice as far as possible. It would be hard to define the dangerous and unhealthy parts of factories without causing constant friction between the inspector and the manager. Although it is necessary to have pure air in factories, I believe it will be an unnecessary hardship to prescribe any very hard and fast rule for maintaining a certain analytical standard of purity. The construction of most of the mills and the climate of the country, coupled with the habits of the people, who leave work at their own sweet will any time of the day, do not call for any strict measures on this point. Instructions from the inspectors from time to time would

Mr. C. D. Panday.

be sufficient to meet this point. It is to the interest and advantage of the employer to keep to a standard of moisture in factories, as tending to improve his output both in quantity and quality. Any restriction from the Government on this point would be quite unnecessary and obstructive. The same may be said of the purity of water used for humidifying purposes. The use of bad water will create complaints from work-people resulting in irregular attendance. I do not think there is any necessity for raising the latrine accommodation to one seat for every 25 workers. But I believe the provision of separate urinal accommodation should be insisted on, as that will relieve a good deal of pressure upon the latrines. I think the prescribing by law that all doors of working rooms must be hung so as to open readily outwards is unnecessary. The owners and insurance companies look after this question efficiently. I believe the present staff of inspectors look closely after the fencing of machinery, and there is no necessity for any further restrictions in this matter. It would be a good thing to secure uniformity in the administration of the Factory Act throughout India, if it is possible to do so. I think there is some room for strengthening the staff of medical inspectors, but not to such a degree as to cause unnecessary expense and annoyance. I am not in a position just at present to give exact figures in relation to (*a*) production *per* spindle, (*b*) waste, and (*c*) the most economical length of working day for a factory, showing the effect of working days of varying lengths But I can say from my practical experience of over 25 years that the production *per* hour decreases, however, slightly with the length of the working day in all cases where one set of hands is at work, and the proportion of waste increases in proportion, and economy in the actual working expenses of the factory itself is not improved by any means. The saving effected by long hours comes in when the standing charges of a company are heavy, such as interest, etc, but even this is compensated for in the long run by the extra depreciation that takes place in the machinery through being neglected when long hours are worked. The best possible check to prevent any abuse due to employing a child without a certificate of age and physical fitness lies in not allowing him or her to commence work without being duly certified by the medical inspectors. The staff of such inspectors requires to be slightly strengthened so as not to cause longer delay at the most than a week It would be unsafe to give any concession for the employment of children prior to medical examination. I do not think it is necessary for a half-timer to submit himself to a fresh examination before working as an adult. The idea may be correct in principle, but it would be somewhat hard to apply it in practice. There is no necessity for providing any safeguards to prevent immature half-timers being employed as adults, as no employer is likely to run the risk of employing a child of doubtful age and physical fitness once the law of not employing any child in a factory without due examination is put into force. The creation of a class of "young persons" would cause great annoyance and inconvenience both to the mill-owners and the factory inspectors. There is no necessity for it at all. If the law be eventually amended so as to create such a class, and to restrict their hours of employment, it will have the effect of partially closing the factories. It will affect more prejudicially a mill with ring spindles than one containing mule spindles. The creation of such a class would only mean the creation of a number of abuses. The suggestion for restricting the hours of working should take the form of imposing definite time limits. This is particularly applicable to a city like Bombay. The suggestion for employing inspectors from the United Kingdom is not without its drawbacks. I believe educated native factory inspectors of good standing would serve the purpose equally well if they were put under a couple of experienced English inspectors of high standing. If a more stringent law than the present is enforced, it should certainly contain provisions to allow of a certain amount of elasticity in its actual operation. I believe the present arrangement in all mills for the work-people to take their food is unsatisfactory. Some slight accommodation by way of an open shed in the mill compound with partitions for different castes is necessary. As it is, the work-people take their food anywhere and everywhere. It may be near a machine, or between them, or in any part of the mill compound. It is also necessary to provide some arrangement for cleaning and washing the *chatties* and vessels containing food. The present system of washing them in the hot-water gutter is objectionable, as all the refuse is carried into the mill reservoirs, creating nauseous effluvia in the hot season.

Oral evidence.

Witness stated that he had been connected with the cotton industry for 30 years. He agreed with the restriction of the working day. He considered that a day of 14 hours was too long for any man to work, and it was bound to have an injurious effect upon the operatives. He would fix the actual hours to be worked in Bombay, otherwise the 12 hours' restriction might be evaded. The shorter day would in time produce a stronger bodied and better class of operatives. On account of the atmosphere in which they worked the weavers were more healthy than the spinners, but generally speaking mill hands were weakly, as a class. He estimated that the hands actually worked from $11\frac{1}{2}$ to 12 hours in a 14 hours' day, and about 5 *per cent.* were always outside in the mill compound. In his opinion the introduction of a "young persons" class would cause confusion, and to distinguish between a "young person" and an adult would not be possible until after a very strict examination. In the ring department 50 *per cent.* would be "young persons" and in the weaving department from 15 to 16 *per cent.* It might be possible to carry on a mule mill without the "young persons," but not a ring mill. Women could work 12 hours without injury to their health, and he agreed with the proposal to raise their working hours to 12. Witness would like a senior doctor appointed, to whom managers could appeal on the question of age. In his opinion children did not work now at two mills in the course of one day. He considered the provision of elementary education a fair charge against the mill-owners. It was the best thing that could be done for the next generation of Indian workmen, and the masters themselves would obtain more intelligent operatives. He anticipated trouble between inspectors and managers if a standard of purity of air were fixed, and in any event the operatives themselves controlled the windows. He did not approve of using tank water for humidifying purposes. Witness considered that the output *per* hour *per* spindle decreased as the hours of work increased, that was to say, a mill working 14 hours would have less output *per* hour than the mill working 11 hours. In the new form of age certificate the child's age should be mentioned, and he considered that the child should not be sent to be examined a second time prior to his working as an adult. He considered that sheds should be provided in which the operatives could take their meals. These would be an advantage, and the hands would take to them in

time. Mill-owners should be obliged to provide sheds capable of accommodating one-eighth to one-fourth of their men at one time, but it must be left to the hands whether they used the sheds or not. If the hours for young persons were fixed at 12, then they would not be affected from the wage earning point of view. He would make attendance at school compulsory, and thereby train up a class of more intelligent operatives. Witness would apply the main principles of the Factory Act to the whole of India. In his opinion there was room for improvement in the present medical inspection for age. The tendency in Bombay was to keep children in the mills for some days before being medically examined, and under certian circumstances it might be possible for a child to escape examination. In his opinion the indebtedness of the mill-hands was partly the result of their manners and customs; they also forwarded money to their relatives in the country to meet various expenses. At times they borrowed in the hope of getting away to their villages without having to pay back the money. A fixed 12 hour day would mean the general introduction of electric light. He had no particular objection to mills fixing their own working hours between a prescribed time, so long as due notice was given to the inspector of those hours. About 10 *per cent.* of extra hands were always engaged above the number really required to run the mill. This meant that it was a kind of shift system, but at the same time all the hands were confined to one particular space for 14 hours, and he considered that a hardship. Even with a shorter day he did not think they would be able to insist upon the hands working all the time. Such were the habits of the people that even if the working day were 10 hours, it would not be advisable to insist upon strict attention to work. He did not agree with the proposed longer interval in the middle of the hot weather day, for if the men went home, 25 *per cent* would not return again to work that day. The elderly people retired to their villages and lived on their lands there with the assistance of their children. A large majority did not work in mills after 50 years of age. After 50 they were no good for mill work, which was too hard for them. They could, however, do agricultural work, which was less severe than mill work. The tendency in Bombay appeared to be to increase the hours of work He thought the use of electric light an improvement, and considered it part of a good equipment for all modern mills. He would not object to a standard of ventilation, provided it could be easily checked and worked out. He would make the manager and work-people the judges of the ventilation of any particular room. He would not like the inspector to be the judge. Over and above the extra hands employed to run the mill, they were always 10 *per cent.* short of their requirements. He could give no reason to account for the absence of that 10 *per cent.* There were no causes inside the mill which prevented the odd 10 *per cent.* from coming in. The system of *dasturi* might be a partial explanation, but that system was not universal in Bombay. Perhaps from 20 to 25 *per cent.* of the hands paid *dasturi.* Witness could not explain why, after engaging say 100 hands over and above the 1,000 men necessary for the running of the mill, they would still in actual practice be 10 *per cent.* short. Witness had seen a very slight improvement in the skill of the operatives. Mr. C. D. Pandey.

Witness No. 58.

Mr. J. G. Hammet, M.I.M.E., Bombay.

I am manager with the New Great Eastern Spinning and Weaving Company, Limited, Chichpokly. The number of operatives employed in the above mills is as follows :—men 1,550, women 451, children 40 This is nearly the average attendance. During the last 10 years the mill has worked over 12½ hours a day, and the average daily number of hours has been 13 for each year during that 10-year period. I append statistics showing the effect of working days of varying length on production. For certificates of physical fitness and age, which are required prior to the employment of children on half-time, the child should be allowed to work at least for a few days pending examination for the same. The period I would like to suggest is 6 days at least. The present arrangements for the medical examination of half-timers are satisfactory, and require no other change. The only safeguard to prevent half-timers who are refused certificates as adults in one factory from working in another would be the thorough examination by a surgeon in the other factory, which must take place before the admittance of any such hands. I am not in favour of creating a class of "young persons" as in the United Kingdom. If the law be eventually amended so as to do this, the effect would be that the machinery would have to be stopped when these "young persons" leave in the evening. Much inconvenience and a distinct loss would thereby be caused. The probable number of "young persons," assuming an age limit for that class of 14-16, is 30 *per cent.* Definite time limits of work should be prescribed within which only the employment of operatives would be legal. If it is eventually decided to restrict the hours of adult labour, the restriction should take the form of imposing a definite time limit beyond which no operative could be legally employed. I do not approve of obtaining inspectors from the United Kingdom. I consider that the factory inspectors should have a considerable knowledge of machinery and mechanics. I wish to bring to the notice of the Commission a suggestion that no factory should be allowed to work for more than 6 days without one day's rest. The working hours of adult males should be limited. The physique of the workers has been affected by long hours. If the hours be limited, 12 hours should be fixed, inclusive of one hour's rest. The method of enforcing the restriction would be to have the working hours of a factory notified to the factory inspector, for every 3 months, by the factory agents. It is advisable to prescribe that the legal working hours, when not working by shifts, shall be from 6 A.M. to 6 P.M., and that the engine should be stopped for one hour between noon and 2 P.M. For factories working on the day shift system, the legal working hours should be from 5 A.M. to 7 P.M., provided that no adult male should work for more than 11 hours out of every 24 hours. I do not think it is desirable to keep a special register of all workers under the age of 16. The employment of women at night should be prohibited in mills only. The minimum age at which children are allowed to work in factories should not be raised beyond nine. Certificates of both age and physical fitness should be required before children are allowed to work in factories. Certificates of both age and physical fitness to work full time Mr. J. G. Hammet. *Written evidence.*

should be required before children who have hitherto worked half time are allowed to work as full-time adults It should be prescribed by law that children shall be employed in morning and afternoon sets only. I do not see any reason why the factory-owners should be obliged to provide elementary education at their own expense. A rule should be made prohibiting non-working young children from accompanying workers to dangerous or unhealthy parts of factories. They should be stopped at the time-keeper's office. In case the non-working young child brings food or any other thing for the working operative, the time-keeper should stop the child at the office and call the operative to the gate. No attempt is necessary to fix a standard of purity for the air in factories. All the operatives get very much more space and air in a factory than they do in their own homes, and therefore there is no necessity to secure further ventilation. No attempt should be made to prescribe a standard of moisture for the air in factories. A standard should be fixed for the water used for humidifying purposes. The standard of latrine accommodation should not be raised, but the provision of separate urinal accommodation should be insisted on—1 to a 100 operatives. It should be prescribed that all the doors of working rooms shall be hung so as to open readily from the inside outwards in case of fire No further precautions for fencing machinery are necessary. Arrangements should be made to secure uniformity in the administration of the Factory Act throughout India. Full-time medical inspectors of factories should not be appointed to assist the present inspectors, but the present inspectors should see that the Act is duly observed.

For the year 1905.

Months.	Working days.	Duration.		Total number of hands.	Yarn produced.	*Per* spindle	20s average	Cloth produced.
		H.	M.					
January	25	13	13	2,145	461,710	6 47	5 24	268,714
February	23	13	17	2,083	410,265	6 27	5 09	235,654
March	26	13	15	2,024	442,053	6 03	5 04	264,146
April	26	14	3	2,054	458,574	6 24	5 25	273,200
May	26	14	15	2,046	443,813	6 03	5 46	306,094
June	26	14	5	2,088	458,350	6 22	5·62	309,592
July	26	14	5	2,097	419,515	5 89	5 35	282 094
August	27	14	5	2,138	467,726	6·61	5 98	327,789
September	26	13	42	2,115	474,911	6·40	5 55	296 102
October	25	12	13	2,119	398,561	5 94	5 16	253,545
November	25	12	15	2,137	437,064	6 11	5 15	245,042
December	27	12	34	2,123	494,121	6 42	5 27	285,501

For the year 1906.

Months.	Working days.	Duration.		Total number of hands.	Yarn produced.	Gross *per* spindle, average.	20s average *per* spindle	Cloth produced.
		H.	M.					
January	25	12	25	2,176	458,753	6 42	5·45	276,981
February	24	12	19	2,171	458,241	6 69	5 56	267,973
March	24	12	25	2,105	442,278	6·51	5 52	246,757
April	23	12	...	2,003	347,450	5·96	5 22	233,532
May	26	12	50	2,010	388,302	5 37	5·09	280,192
June	26	12	42	2,051	400,561	5 50	5·64	296,058
July	21	12	46	2,069	273,205	4 85	5·21	187,128
August	26	12	32	2,077	413,549	5 37	5 17	256 562
September	25	12	40	2,029	427,433	5 91	5·28	255,214
October	27	12	42	2,106	462,654	5·90	5 44	267,705
November	26	12	35	1 985	421,739	5 29	5 20	256,490
December	27	12	35	2,057	439,007	5·37	5 23	278,150

For the year 1907.

Months.	Working days.	Duration.		Total hands.	Gross yarn produced.	Average *per* spindle.	Converted 20s average.	Cloth produced	
		H.	M.						
January ...	21	12	31	2,045	337,659	5·36	4·72	209,404	This all depends on the counts and the description of cloth.
February ...	23	12	14	2,019	393,551	5·55	5 23	208,426	
March ...	26	12	37	1,990	444,618	6·05	5 18	240,235	
April ...	26	12	50	2 047	431,925	5 81	5·23	258,464	
May ...	27	13	10	2,055	480,785	5 76	5·41	257,378	
June ...	25	13	22	2,067	436,734	5 53	5·26	249,100	
July ...	27	13	10	2,080	462,765	5 85	5·47	259,487	
August ...	26	12	40	2,062	411,459	5·42	5·19	247,258	
September ...	26	13	...	2,068	422,679	5 75	5·13	253 459	
October ...	26	12	35	2,041	375,734	4·88	4·78	238,282	

Witness stated that he had been interested in the cotton industry for 34 years. His mill worked nearly 13 hours. The cause of short production was that the men did not work properly, and no one could expect any man to work well beyond 11 hours a day. He thought an hour's interval at noon would be an improvement, as more of the hands might be able to go home for their meal if that interval were given. He would not, however, compel the operatives to take their meals in that interval. He saw no reason for supposing that the men, when once away for the hour's midday interval, would not come back to finish their day's work. A shorter day's work would result in the improvement of the physique of the hands. In his opinion, taking them as a class, they were not so good as 20 years ago. Years ago it was rare to see an operative drunk, but of recent years they had contracted the vice of drinking, and what with drink and the long hours they had altogether deteriorated in physique. The operatives at the end of the day were worn out and tired, and so took something in the nature of a stimulant. Witness thought that the facilities for drinking had increased greatly of recent years, and he objected to so many liquor shops being licensed in the mill neighbourhood. A day restricted to 12 hours would adversely affect the industry, so far as outside competition was concerned. Witness could not say that the production *per* hour was less in the long day than in the short day. The proposed class of "young persons" would affect 35 *per cent.* of the mill hands, but if they were allowed to work 12 hours *per* day, then his objection to the creation of such a class lost some of its force. He did not like the idea of an additional class, which would cause more confusion, and would necessitate the keeping of another register. Even now he was trying to do without half-timers. The mill-owners would be able to run their weaving sheds without this class of "young persons," and it was also possible to run a spinning mill without their aid. He could not run his weaving shed unless the rest of the mill was working, but many owners had a separate engine for weaving, and it would be profitable for them to continue working. They might also have a clutch to throw the machinery in or out of gear as the case might be. Witness did not think it would be impossible to run a spinning mill without people under 16 years of age; it might be a little difficult, but it was possible. He would, however, say that he could not run his mill profitably without these young persons It was possible that some persons would try and secure all adult labour for their mills, but against this they had to remember the general scarcity of labour. If the young adult class was created, he thought it possible that a lot of youths would work for a week before examination at one mill, and then go off to another mill for another week. For instance, if a mill proprietor had six mills in Bombay, he could have six sets of young adults changing about from mill to mill, and so evading the law. There were several mill-owners in Bombay who controlled more than one mill. Witness did not think that the operatives saved much money, on account of their drinking habits, neither did they go away to their villages so frequently as formerly. The elderly men retired to their country to live on their relations, rather than on the money they had saved. Their wages were extremely good, but too large a proportion was spent in liquor. Their idea in coming to the mills was to earn money with which to live, and the margin went in pleasure and in the gratification of bad habits contracted in the last fifteen years. Formerly the owners had no trouble with the men, but now they had a great deal of trouble. Witness was not prepared to say that in 1905 the men themselves asked for the working hours to be increased from 12 to 13. In his mill the working hours were regulated by daylight. They worked from daylight until 7 P.M. It was difficult to say what the hands would like, but he considered that, with a 12 hours' day, the operatives would be more attentive to their work, and would improve in health and skill. After one or two months of reduced wages he considered that the men would realise the situation, and would settle down to work more steadily. There was an instance of this in the famine year of 1898, when the mills worked a short day, and closed for eight days in the month. The loss in production was a great deal less than was anticipated, and in the course of three months there was a noticeable improvement in the habits of the men while at work. The saving in stores also was considerable. The short day was the result of a resolution of the Mill-owners' Association, but it was not acted upon, and not even six mills worked it for one week. The proprietor of the mill where witness then was persisted in keeping to his word, and they worked according to the resolution. The men idled away their time equally as much in the cold as in the hot weather; they took about one and a half hours off in the course of the day. Witness had never heard of a workman in any part of the world who could do 13 hours' work without slacking, and no one could work more than six days running without a rest. He approved of the compulsory Sunday holiday, which would permit of many of the minor holidays being dispensed with. Three hundred working days in the course of the year were quite enough. The practice in his mill was to allow the half-timers to work their full time and then leave. This gave them the opportunity of working in other mills, but witness was not prepared to say that they did so. If a boy left the mill at noon, they could not expect the jobber to trace the boy after that hour. In his opinion mills were already sufficiently well ventilated. Witness approved of the proposal to obtain both age and physical fitness certificates, and would apply the system to those youths who had not been half-timers also, as well as to half-timers and children. He attributed the increased production of the mills to the improvement in machinery, which, however, required more skill from the men. The operatives were as casual as ever, and, if anything, worse now than 20 years ago. In his opinion the mill hand was a more respectable man years ago than he was now. The hands were independent, and if they worked long hours it was in order to obtain more money. He thought that the men generally had the upper hand of their employers and they knew how to strike work if necessary. Years ago the men had organized strikes, and they might have an organization now for all he knew to the contrary. They often struck for higher wages now and nearly always obtained some increase. There had been an increase in wages during the last 20 years. A boy now drawing Rs. 10 used then to earn Rs. 2-12-0 or Rs. 3

Mr. J. G. Hammet. *Oral evidence.*

Witness No. 59.

Mr. B. A. Desai, managing agent of the Jafur Alee Spinning and Weaving Company, Limited, Surat.

I am of opinion that the hours of adult males should not be limited, as I do not think the physique of the workers has been affected by long hours. If the number of hours is to be limited at all,

Mr. B. A. Desai. *Written evidence.*

Mr B. A. Desai.

I think the maximum should by 12½ hours. The legal working hours should then be from 6 A.M., to 7 P.M., and the engine should be stopped for half an hour between noon and 2 P.M. Factories working under the day shift system ought to have legal working hours from 5 A.M. to 9 P.M., but adults should not be allowed to work more than 12½ out of the 24 hours. I have not observed persons between the ages of 12 and 14 illegally employed as adults. I do not think that it is necessary to create a separate class of young persons It is not necessary that a special register of workers under the age of 16 should be kept similar to the register for workers under the age of 14. The employment of women at night should be prohibited. There is no necessity to raise the minimum age of children, as in my opinion the work entrusted to them does not interfere with their physical development. I do not think it necessary that the children should be examined for physical fitness, as they become healthier after they come to work in factories. It is not necessary to re-examine children before they work as full-timers after they have once procured certificates as half-timers. It may be prescribed by law that children should not be employed except in regular sets. Factory owners should not be compelled to provide elementary education for children employed by them, because the experiment has failed in several mills. There is no need of making a rule prohibiting non-working young children from accompanying workers to dangerous parts of factories, as we take special care on this point ourselves Neither have we had, or heard of, any accidents from this cause to non-working children. All the mills that I have seen are properly ventilated. No attempt need be made to fix a standard of moisture. I doubt whether any such rule would produce the desired effect. In our mill at Surat the water used for humidifying purposes is pure water. The standard of latrine accommodation should be raised to one seat for every 25 workers, and separate urinal accommodation should be insisted on. It may be prescribed that doors must be hung so as to open outwards. It is not necessary to have further precautions for fencing machinery in spinning and weaving mills Arrangements may be made to secure uniformity in the administration of the Factory Act throughout India. I do not approve of the suggestion to appoint full-time medical factory inspectors from the United Kingdom, as in my opinion the present inspectors secure the due observance of the Act. I am managing agent of the firm of Messrs. Duncan Stratton & Co., who are agents of the Jafur Alee Spinning and Weaving Mills, Limited. The number of hands employed in the above mills is as follows:—

521	males.
207	females.
127	children (males).
73	„ (females).
928	

The Jafur Alee Mill has been working for nearly 44 years, and I should think that on an average the mill works on 80 days for more than 12½ hours a day in a year. The average working time all round the year is about 12¼ hours a day. Unfortunately, the statistics of the variation in production for different working hours have not been preserved. I can safely say, however, from the production books, that in longer days we get about half an ounce more *per* spindle in 20s than in the shorter days of the year. If there be a restriction on the working hours, the production in longer days will be comparatively less. In summer the best work is done in the morning and evening hours. The Indian labourer is not the same as the English one. This is not merely the experience of the Indian mill-owners alone, but the same opinion is also held by the English mill-owners in India and the English managers, spinning masters and weaving masters who are in touch with Indian labour every day. The Indian labourer has absolutely no idea about duty. He will take fully one hour, after he comes to the mill, in washing, etc. He also takes one full hour for his meals, and over an hour for smoking. He wastes like this at least four hours in a day. There should be no restriction on the working hours. Instead of this the mills should be stopped twice a day from 8-30 to 9 A.M. and 1 P.M. to 1-30 P.M. It is said that Indians as a nation do not understand the significance of the holy word "duty," and this is particularly applicable to the Indian labourer. I beg to draw the attention of the Commission to this defect of the Indian labourer. The only remedy for this is that the Government should open free schools for the primary eduction of half-timers. In such schools special attention should be paid to teaching lessons of that kind which would relieve the would-be Indian labourer from the nasty and mortal habit of drinking. In my opinion the Indian factory labourer lives longer and leads a happier life than any other Indian labourer. He is the best paid man in his class, and but for the ruin brought in his family by drinking and reckless expenditure, he would be richer and happier by far than ordinary Government officials or ordinary clerks, who have sometimes to work more than 10 hours a day, and get 12 to 20 rupees a month. The classes that work in factories are growing from day to day, while those villagers who have to work in farms are decreasing. I may be allowed to bring to the notice of the Commission that no Indian labourer attends to his work all the days in a month. In Surat no labourer attends to his work more than 21 days, on an average, in a month. There is a great difference between the skill of the Indian and that of the English labourer. Three to four Indian labourers do not work so satisfactorily as one English labourer does One week is sufficient time to get certificates for children. Separate muster rolls for adults and children of different sets should be kept in order to check all irregularities. The factory inspector takes all possible care to see that no half-timer works as an adult. It may be added that, on an average, every child goes from 3 to 4 times to the Civil Surgeon before he is passed as a full-timer. The creation of a class of young persons will be very troublesome to mill agents. There will be a lot of confusion by creating this class. There is no need of creating this special class, as I neither see the utility nor the benefit of so doing. The best standard for working factories is from sunrise to sunset, except in the case of mills which work by electric light and by shifts. It has been already mentioned above that the Indian labourer does not work all the time he is supposed to do. It will go against his own interest to allow him greater time for recess till he is made to understand the principles of thrift, sanitation and duty.

Mr. B. A. Desai.

The Indian labourer should be kept busy with recreative work even on holidays. Cases of infringement of the Factory Act are tried, as a rule, by an ordinary Magistrate. I suggest that it would be better if all cases of this kind be tried by an ordinary Magistrate jointly with an Honorary Magistrate, nominated by the Government from one of the mill agents. I am of opinion that there should be Indian factory inspectors, who naturally are in better touch with the Indian people than European inspectors are. I would further add that such factory inspectors should stay in England for two or three years, and be trained for the purpose. The idea of lodging all labourers in special *chawls* is to be welcomed. These *chawls* should be built on the latest sanitary principles. This would be advantageous to both the employer and the employed. The suggestion to enforce special arrangements for urinals would be welcomed by all. Most of the mills in India are well ventilated.

Oral evidence.

Witnes stated that he had had two years' experience in the industry. He employed *dhers* and *wagris* in the spinning, and Mahomedans in the weaving. He worked by natural light, and considered that with fixed shorter hours they would lose in production. Out of 900 hands about 150 were always absent, and extra hands had to be employed. The average pay was Rs. 12 a month. He sent the children to the hospital once a month, and the certifying surgeon's fee was 4 annas a child. The Surat hands were worse than those in Ahmedabad, and spent from three to four hours off each day. If the agent was strict, then they struck. In the spinning 17 *per cent.* were always out, and in the weaving 15 *per cent.* The passes were always all in use. The mill was recently working at a loss but last month they made both ends meet. The hands drank, and were in debt to the extent of Rs. 18,000 to a *borah*. The social customs also helped to prevent them from saving any money. He did not think that females would work on the looms. The children played about the compound when they had finished their set, and were not employed again that day.

Witness No. 60.

Mr. Gokuldas Naranji, Bombay.

Mr. Gokuldas Naranji.

Written evidence.

I represent the Bombay United Spinning and Weaving Company, Limited, Bombay, as mill manager. I have been connected with the cotton industry for the last 30 years in all its branches—ginning, pressing, spinning and weaving. The average daily total of hands present in the mill for the last five years is 1,229 men and 146 women, that is, a total average of 1,375 operatives out of an average of 1,492 hands in the muster roll. Thus the average of absentees is 9 *per cent.* For the last 7 years the mill has worked about 200 days in each year for over 12½ hours *per* day, and the average working time *per* day is about 12¾ hours during that period. Statistics of production showing the effect of working days of varying length are as under:—

Working days of	Production *per* spindle *per* hour 20*s* average count ring and mule together.	Production of reeling yarn *per* spindle *per* hour.	Percentage of waste.	Period covered by these statistics.
12 hours ...	0·45 oz.	.....	2·30	1905 to 1907, November to February.
13 hours ...	0·45 oz.	.....	2·32	1905 to 1907, March to October.

Regarding certificates of age for children, I am of opinion that an allowance of about 10 days should be given by law in which a manager might engage a boy prior to his obtaining a certificate of age; but a certificate of physical fitness is not necessary, as it will create confusion on account of the varying standards that may be applied by different medical men. I think the present limit of nine years for children is quite reasonable, and should not be enhanced, as I am of opinion, based on many years' close observation, that children do not suffer any physical deterioration by working in cotton factories. If the age limit be enhanced, it will entail much suffering and privation on people of that class. I also hold that children at the age of nine are sufficiently developed to readily learn the work they are called upon to do, and it is good that they should learn habits of work early in life and earn an honest livelihood. I may say that the mill I now represent has no children working in it. I do not think it necessary to make it obligatory for a child who has hitherto worked as a half-timer to obtain a certificate either of age or physical fitness before he is allowed to work full time as an adult. A half-timer should be allowed to pass on to the full-timers' class automatically when he attains the prescribed age of 14. There is no practicable safeguard to prevent a man, not certified in one mill, going from that mill to another, and passing there for full-time work. Regarding the suggestion to create a class of young persons, I am of opinion that it is not at all necessary; and, if adopted, it will throw out of employment a large number of operatives, and at the same time will be detrimental to factories and create confusion, as this class of workmen forms not less than 20 *per cent.* of the total, especially in ring mills. Regarding the suggestion to fix definite time limits for the working hours of adult males, I do not think it necessary, but it should be left to the employers and employés to settle among themselves. Mill labour is not so hard as certain kinds of other labour, and the mill hands are in the habit of taking rest at frequent intervals during working hours, and are always willing to secure engagements in mills where they have the certainty of a permanent income. I do not think the present Factory Act requires any alteration, and I may also say that it should not be made any more stringent than it is at present. Regarding the question of trained inspectors, I am of opinion that the present staff of Government inspectors of factories is competent to discharge its duties. If any more stringent law is enacted than that which is now in

Mr. Gokuldas G. Naranji.

force, it will result in hardship to numbers of workmen, who are happier as factory labourers than they could be as outside labourers. In support of this, I may say that the present practice of workmen in mills is that although the mills work for 13 hours a day, the operatives are at actual work for not more than 10 hours a day, and for about 3 hours they are not actually at work, but take rest in eating their meals, smoking, and so on. For this reason the mills have to engage a certain percentage of extra operatives over and above their actual requirements, which is several times more than is required in England for any given number of spindles or looms. Indirectly, the employment of extra operatives amounts to a system of shifts in India. I am not in favour of any rule prohibiting non-working young children from going into mills with their parents or relatives, as the mills are far better than their insanitary houses. The standard of latrine accommodation is sufficient. Fencing of machinery, as at present carried out, is adequate, and I do not think any alteration is needed in the regulations regarding this matter.

Oral evidence.

Witness stated that he had been 35 years in the industry, and was in charge of the ninth mill erected in Bombay. In his present company they employed no children, and they were able to obtain a sufficient number of adults. In 1905 they worked up to 7 o'clock at night. He did not think a 13-hour day exhausting, because the men actually worked only 10 hours of that time. If the hours were to be restricted, he agreed with a maximum of 13 hours. Any shorter period would injure the industry, and involve a heavier capital expenditure. He did not anticipate any improvement in output with shorter hours, and the men would certainly not be more industrious. He found that the men gladly went to those mills which paid extra wages for overtime. The output *per* hour was practically the same in the long as in the short days. In his opinion the operatives as a class had improved in skill, but were as slack as ever in their habits. During these years the machinery also had improved. The wages had increased from Rs. 7 to Rs. 11. After their annual holiday the operatives would return to the same mill. The majority took one month a year, but others went away for from two to six months. While away they lived on their savings, and the absence of elderly men from the mills was due to the fact that they retired to their own villages, where they had land which they had bought out of their earnings. Mill operatives were not a short lived class. Witness thought that the work-people would approve of a 13 hours' day; they certainly would not approve of 12 hours. He objected to the creation of a class of "young persons" on the ground that the work given to these lads was not so hard as to injure their health. They did not require further legislative protection. He knew of no parents who had sent physically unfit children to the mills to earn money for them, but on the contrary he knew of parents who had resolved to keep their young children at home. The doctor attended at the mill to examine the children for age certificates whenever his presence was requested and his fee was paid whenever he came. Mill operatives had not deteriorated in health and, if anything, they were stronger now than formerly, because they earned good wages, could save and live well, and have better food. Their work was also easier and less fatiguing than outside labour generally. The creation of the "young persons" class would automatically limit the hours of labour as these formed a large proportion of the total number of operatives. In his opinion 30 *per cent.* of the operatives saved money, but the other 70 *per cent.* were in debt. That did not indicate that owners did not pay sufficient wages The wages were high enough, but the men had become extravagant The increase in wages had been gradual, and he did not agree with the statement that there had been no increase in wages in Bombay for 25 years. He had ascertained from the people themselves that they would prefer a 13 hours' day, because it enabled them to earn more money, and the large majority of workers were on piece-work. The habit of absenting themselves from work was not due to the fact that they were tired. He considered that a child of 14 was able to do a day's work, and the examination for physical fitness would merely create confusion. A short day, entailing constant application, would be more arduous to the operatives than a 13-hour day with the unauthorised intervals of rest. Previous to the introduction of electric light in 1905 they only worked 11¼ hours in the cold weather, and there were just as many absentees then as there were in the longer hours now. Witness maintained that there had been an increase in wages, and that operatives were not too poor to keep their families in Bombay.

Witness No. 61.

Sir Bhalchandra Krishna, Bombay.

Sir Bhalchandra Krishna.

Written evidence.

The working hours for adult males should be limited to twelve hours and a half, from 6 A.M. to 6-30 P.M., with a recess of half an hour at noon. The physique is undoubtedly affected by factory work, but the deterioration is due more to the want of good ventilation and other sanitary requirements, and to bad habits of living, than to the much abused long hours. The regulation of labour should be left to the enlightened good sense of the mill-owners and under no circumstances should the hours be regulated by legislation. The mill-owners are all very respectable and educated men, and are sufficiently intelligent to understand that it is their own self-interest that demands the prevention of the impairing of the efficiency of the operatives through overwork. They can therefore be depended upon to look to their own interests. As regards the special class of "young persons," I think it is desirable in the interest of the operatives themselves to create such a class, to comprise boys between 14 and 16 years of age, and not 12 and 14. The work to [illegible] be exacted from them should be restricted to between 9 and 10 hours. Women should, under [illegible]ties. [illegible]o circumstances, be employed at night, and they should not be allowed to take their children [illegible] It may [illegible]hin the mills. The minimum age at which children are allowed to work in factories should [illegible] before [illegible]aintained, as at present, at 9; it is absolutely necessary that their age and physical fitness [illegible] some to [illegible]d, before they are allowed to work in factories, be certified by qualified medical men [illegible] of creatingly appointed for the purpose. The mill-owners are in my opinion under a moral obligation [illegible] standard fo[illegible]ide, at their own expense, free elementary education for children employed in their mills. [illegible] by electric [illegible]vantages of educating the working classes are all patent, and stand in no need of [illegible] does not wo[illegible]on. Most of the evils of which the labouring classes are, of course through their own [illegible] greater time t[illegible] the easy victims, would to a large extent be obviated by the spread of education [illegible]em. The mill operatives are often charged with voluntarily overworking themselves

out of sheer greed in a way detrimental to their health and interests, and also with extravagance, habits of drink, etc. Most of these charges are undoubtedly well-founded. But I should think the evils are largely due to their ignorance. The spread of education amongst them will, I have every reason to hope, result in at least the partial removal of such evils, and in creating a class of workmen, more intelligent, skilled, and more efficient. It is therefore to the interests of the mill-owners themselves to attend to the education of the children employed in their mills. The schools should be in the vicinity of the residential quarters of the working classes, they should be conducted at night, and be under the management of the mill-owners themselves, but may be placed under the supervision of the Joint Schools Committee in Bombay, and of the Municipal Schools' Committee in the districts. Government, too, ought to assist such schools in all possible ways, and treat them as aided schools. In this connection I wish to add that the imparting of elementary sanitary principles should form part of the school syllabus. All such sanitary measures as are calculated to ensure the health and comfort of the operatives ought not only to be welcomed, but ought to be enforced by legislation, without of course unduly fettering or irritating the mill-owners. I am convinced that the deterioration of the physique of the operatives is, as I have stated at the outset, more the result of the absence of the necessary sanitary arrangements than of long hours. It is this part of the important question of factory work that ought to be the special and probably the only province of legislation. I am of opinion that whole-time medical inspectors should be appointed to inspect the sanitary condition of the mills and the physique of the operatives These inspectors should be recruited from the medical graduates of the Indian universities, as they are better acquainted with local conditions, and more in touch with the life, customs and habits of the operatives. They should be specially retained for factory work, and may form part of the Subordinate Medical Service but certainly not of the Indian Medical Service. Very frequently two or more offices are combined in the individual members of this last service, who as a consequence cannot be depended upon to efficiently discharge their varying duties. In view of the above considerations, apart from others which need not be mentioned here, I am firmly of opinion that the services of the medical graduates of Indian universities should be requisitioned for these purposes. These inspectors should be on a level with the members of the Subordinate Medical Staff. There are two important subjects connected with the health of the labourers to which I would invite the earnest attention of the Commission, *viz.*, the housing of the operatives, and the location of grog shops. The first question I have dealt with at length in a pamphlet * which I submit herewith, and would request the attention of the Commission to page 63. As regards the latter, I am fully satisfied that much of the spread of the vice of drinking which eats into the very vitals of the working classes, and renders them impoverished and inefficient labourers, is largely due to the location of grog shops in the vicinity of the mills and the residental quarters of the operatives. I need not dilate upon the way in which these ignorant operatives fall easy victims to the powerful temptations thus thrown in their way. I would therefore earnestly request the Commission to pay their special attention to these, and to recommend such measures as will remove this crying evil. Lastly, I wish to add that, whatever legislation may be found to be necessary, care should be taken to see that it would not be such as would either tend to hamper the mill industry in any way, or to reduce the wages of the mill operatives.

Sir Bhalchandra Krishna.

Witness stated that he had had a medical practice in Bombay for 22 years, and a certain number of mill hands became his patients. He had also had opportunities of studying mill operatives in various ways. It was his opinion that they were weaker in health than labourers in outside employments, and immediately they were taken ill they returned to their country. Should the death rate of Ratnagiri and other districts from which mill labour was drawn be low, he doubted very much whether they could put much reliance on such figures. In Bombay there had been a deterioration in health owing to the conditions of mill employment, but that deterioration had not been sufficient to affect adversely the death rate. When he proposed to allow "young persons" to work for nine hours he understood there was sufficient labour forthcoming for two shifts. If, however, they took about two hours rest during the 12 hours day he saw no need to restrict them to nine hours. If the deterioration in health had been solely due to work in the mills he should have advocated a restriction of adult male labour, but there were other causes. There was bad ventilation, both in the mills and *chawls*, and also the ever-present temptation to drink. Witness thought this deterioration in health was not entirely due to the long working hours of which he disapproved, and he thought that the good common sense of the owners would now favour a twelve hours day. Personally, he relied on the humanity of the Bombay mill owners, and so did not agree with any legislative restrictions on the working hours. The atmosphere of the mills should be improved, and the drink evil had to be removed. It was not correct to attribute the deterioration in health to the long hours worked. He considered drink the primary cause, and the length of hours a secondary matter. Liquor was taken as a stimulant, but it was not a proper remedy. Poverty and bad environment were largely responsible for this drink habit, and so long as the liquor shops were there so long would there be the temptation. Under the present conditions of work he did not consider that thirteen hours a day were excessive, and up to date he did not think that the long hours had had any bad effects upon the health of the operatives, no more, in fact, than what was necessarily bound to occur through working in badly ventilated mills. Witness approved of the fixation of a standard of purity for air, and the creation of a 'young persons' class. Education should also be given; and he would like to see compulsory education in Bombay. Mill-owners were under a moral obligation to educate their half-timers.

Oral evidence

Witness No. 62.

Messrs. Tata, Sons and Company, the Swadeshi Mills, Bombay.

We are strongly of opinion that the working hours of adult males should be restricted by legislation. However much we may deplore interference by Government in private enterprise, we are convinced by our experience of late years that both owners of mills and work-people are

Messrs. Tata, Sons & Co.

Written evidence.

* Not reprinted.

Messrs. Tata, Sons & Co.

so much wrapped up in their greed for immediate gain that they are absolutely blind to the evils in store for them in future years, and the only sure way of preventing inevitable mischief is limitation of working hours by law. In most of the Bombay mills at present, with artificial light, the hours of work extend to as many as 13 and 14 hours a day; but even in the few mills which work during daylight only, though the average during the short days comes to slightly less than 11 hours, it comes to over 13 hours in the longest and most trying days in the hot weather. Considering all the circumstances, we would advocate an uniform working day of 11 hours net. If an 11 hours' limit be fixed, we would advocate two recesses of half an hour each—one, say, at 10 A.M., and another at 1-30 P.M. This would give a good division of the day, and lessen very much the evil of work people going out so often, causing irregularity of work. If, however, it is not found feasible to bring down the working day to 11 hours on the score of foreign competition, and curtailment of profits for owners and wages for men, at all events the working day should not go beyond 12 hours. It would be advisable to leave the starting and closing of mills to the discretion of the mill-owners, for any hours between 5 A.M. and 8 P.M., with the proviso that they should beforehand inform the inspector of the hours during which they intended to run their engines. If there has been physical deterioration owing to the illegal employment as adults of persons between the ages of 12 and 14, we do not see why the remedy should be a creation of a special class—"young persons"—as under the English Act. Such a course would merely multiply the points of contention which cause friction between Government and the mill-owners. The best remedy would be to check the illegality and not add to it, as probably would be the case, by further complications. We can see no necessity for a special register of all workers under the age of 16. This would entail endless trouble, and would never be reliable or satisfactory. The employment of women should be prohibited in factories working all the year round, but not in seasonal factories, such as ginning mills. The present minimum age of 9 for children, who work not more than 7 hours a day, is no hardship to them, and there is no necessity to raise it. If the working day be 12 hours, they would have to work only 6 hours, if 11, only 5½ hours, which would give them greater relief. We do not allow any child to work in our mill before procuring a certificate from the Civil Surgeon at Thana. Children are sent either to Thana, or the Civil Surgeon is called to Kurla to examine them. We think a period of one week may be allowed to procure certificates. Of course, there must be a sufficient number of surgeons to lighten the work of inspectors. In the present form of certificates the certifying surgeon, at least in our case, enters the age of the child at the time of inspection. When according to this certificate the child attains the age of 14, he ought to be allowed to work as a full-timer. We do not see any necessity for his being examined again. As it is, there is nothing to prevent a child who is certified as a half-timer in our mill by our certifying surgeon from joining another mill and being passed as a full-timer by another surgeon. We have instances of this kind in our mind. We are at present at the mercy of the personal idiosyncrasies of different certifying surgeons. Owing to the present faulty system of inspection, we have been told of instances of children who were passed as half-timers by the certifying surgeon at Thana going from Kurla to Bombay by rail, simply because they can pass there as full-timers and earn a higher wage. We think there is no necessity to make it compulsory to employ children in different sets. We do not know why the onus of giving free education should be thrown on mill-owners. It would be best to stop the practice of allowing non-working children to accompany workers, if possible. It has crept in lately; but it is certainly bad. If an attempt be made, by testing samples of air taken from factories in India, to prescribe an analytical standard of purity of air, this would be a move in the right direction But great care should be taken to study local conditions; and the work, instead of being entrusted to mere factory inspectors, should be placed in the hands of experts who will fix the standard. For this purpose it would, we think, be advisable to consult the Mill-owners' Association also. The question of moisture should be left to the discretion of mill-owners in India; this is not at all likely to be abused. We do not think it is necessary to fix any standard of purity for water used for humidifying purposes, as foul water is not likely to be used. The standard of latrine accommodation should not be raised to 1 seat for every 25 workers, more especially if the provision of separate urinal accommodation be insisted on. The present rule of providing 1 seat for 50 persons, besides urinal accommodation, has proved to be quite reasonably sufficient, and has inflicted no hardship on the operatives; and we maintain that the alteration as proposed is not warranted by the necessities of the case—certainly not in regard to large factories. It is sure to entail unnecessary expense on mill-owners It will not only increase the first cost of land and buildings, but also the recurring cost for conservancy, maintenance, and repairs. In a growing city like Bombay, where land is increasing in value daily, much of the valuable land which might be filled up with useful buildings would be taken up by latrines. The hardship incidental to the present limit of 1 seat for every 50 persons in regard to very small concerns, such as ginning and pressing factories, is obvious. It is essential that a distinction should be made in this respect, as it would not be fair to insist on an absolute uniformity in spite of the widely diverging circumstances of the two classes of factories. All doors, as far as possible, should open outwards in case of fire Machines appear to be properly fenced at present, no further precautions appear necessary. Uniformity in the administration of the Act throughout India is a desideratum, and should be aimed at, as far as possible, but local conditions should be studied and a certain degree of elasticity should be allowed. Full-time medical inspectors would be welcome, as they are more likely to devote their whole attention to the work before them. Our firm are the agents of—

The Central India Spinning, Weaving and Manufacturing Company, Limited.
The Swadeshi Mills Company, Limited.
The Ahmedabad Advance Mills, Limited.

The Swadeshi Mills employ—

Adults.	Males	...	1,881
	Females	...	604
Children-	Boys	...	302
	Girls	...	226
Total number of operatives		...	3,013

We append a statement showing the average working hours for the last 10 years— Messrs. Tata, Sons & Co.

Years.	Average actual hours during the last 10 years (including cleaning time, but excluding the half-hour's recess in the middle of the day).	Number of days in each year on which the mills worked 12½ hours during the last 10 years (exclusive of the half-hour's stoppage in the middle of the day).
	H. M.	
1897	12 8	112
1898	12 4	120
1899	12 4	125
1900	9 4 (worked short time).	22 (worked short time).
1901	12 10	124
1902	12 12	118
1903	12 6	110
1904	12 6	119
1905	12 2	110
1906	12 5	107

It is very difficult to give any definite opinion as to the effect of the length of day on production. It is true that the shorter the working hours the greater will be the hourly average. But the increase in the hourly average will not be so great as to compensate for the loss in time. Much depends upon the quality of cotton used, the number of spindles worked, the change in atmospheric conditions, &c., during the different parts of the year. We want to emphasise the fact that the age limits as prescribed now do not require alteration of any kind, either for half-timers or adult workers. The only necessity is that there should be greater method and uniformity in the examination of these persons by medical authorities. If that can be achieved, we maintain that the age of 9 for children and of 14 for adults is right, as at this age they are, with very few exceptions, absolutely fit for the work entrusted to them. If this work of examination be carefully and systematically carried out, there will not arise the necessity of creating a class of "young persons." That the medical examination of children and adults is not at present carried out, as one would desire, is unfortunately too true. In our Swadeshi mill at Kurla, we have been sufferers for a long time, owing to the different standards of examination set up by different medical inspectors of different districts. We have instances where children and adults, who failed to pass the tests of the Kurla surgeon, have got employment in Bombay, simply because the doctor of that district was of a different opinion. On this score our experience has been very bitter, and we think it is high time that a standard of examination should be fixed, which, as far as possible, should be uniform for all districts. It would be an advantage to have inspectors with English experience, but they must as a *sine qua non* have a thorough local experience also. A great deal of elasticity should be introduced in the enforcement of any new legislation. Adults may be permitted overwork in certain cases; for instance, when the mills or the engines are stopped, men may be allowed to work in making mixings, carrying articles, removing waste, cleaning boilers, and other repairs. Regarding the housing of factory hands in all our mills, we are working on the lines of providing them with sanitary accommodation at a rental which gives only a nominal return on our money. Our idea is that by so doing labour remains more concentrated and steady, which is a decided advantage to us. At the same time, the work-people benefit also by residing in cheap and sanitary dwellings.

Oral evidence. Mr. N. B. Saklatwalla, representing Messrs. Tata and Sons, Bombay.

Witness stated that he was a director of the three mills controlled by Messrs. Tata and Sons, and he had been connected with the industry for ten years. He had considerable practical experience of the industry, and his evidence represented the views of the firm. He advocated shorter hours of work, and thought that though at first the owners' profits might be less, yet when one considered the question in the light of the years to come, a restricted working day was advantageous both in the interests of the owners and the work-people. Their three mills did not work long hours. They had done sufficiently well with the shorter hours, and so did not think it advisable to adopt the very long hours. He approved of an 11 hours' day. At present they worked an average 12 hours' day all the year round, i.e., they worked from daylight to dusk, but by that arrangement the longest day came in the most trying part of the year. He would have fixed hours of work for all the year round. There might be trouble at first with the work-people over their reduced earnings, but if the hours were restricted by legislation, then he thought that matters would adjust themselves. In his opinion the proposed new class of "young persons" would lead to extra confusion, owing to the difference in the age standards adopted by various doctors. The standard was much higher in Thana than in Bombay, and as their mill at Kurla had to compete with Bombay mills, he asked that it should be placed within the jurisdiction of Bombay. He considered that the standard adopted in the Kurla mill was sufficiently high, and if possible other mills should be brought up to that standard. A uniform age test was required, and he approved the suggestion to appoint a whole-time medical officer. No non-working children were allowed in the Kurla mill, but in their up-country mills children in arms were allowed to be brought in by their mothers. He estimated that on an average 10 *per cent.* of the mill-hands, idled away their time by being absent from the work-room. He had

Saklatwalla. arrived at this conclusion by taking surprise counts during the day. He found the piece-workers were more attentive than the daily wage earners. In the spinning room the loitering reached 14 *per cent.*, but in the weaving room it was only 3 *per cent.* Witness had also prepared a tabular statement showing that only 25 *per cent.* of the hands put in a regular month's work. He attributed the absences to the long hours of work. The men needed a rest, and with an 11-hour day the owners would obtain a better attendance. In addition to the 10 *per cent.* idling the men also took their meals in the mill. In the course of the day they probably took two hours off, and in his opinion with shorter hours the owners would be able to enforce better discipline. They had to employ extra hands to overcome the difficulties caused by the idling habit, but even then they could not obtain sufficient labour for the mill. He believed that stricter working for an 11 hours' day would be much better than the present 13 to 14 hours' day, with the present loitering and idling. A few years ago they were forced to work an eight hours' day, and the men, knowing that their wages would be less, were much more attentive to their work. The overseers were stricter, and the men worked well without wishing to be perpetually going out into the compound. He estimated that the weavers only wasted about twenty minutes by going out in the course of the day. He considered that rather good, but they stuck to their work much better than the daily wage earners. He objected to the "young persons" class, because they already had examinations at 9 and 14 years of age, and an extra class would multiply the confusion. The root of the evil was the excessive working hours, and he preferred that legislation should go straight for the adult hours. He considered 11 hours' work quite long enough for women, considering that they had their household duties to attend to. A certain amount of latitude should be allowed in regard to the employment of a child before being passed for age. At Kurla they had two sets for the half-timers, and at one period of the morning, in order to get the mill in proper running order, both sets were employed together for about an hour. His experience was that the mill-hands appreciated *chawls* close to the mill, and they were anxious to occupy any empty rooms. Of course the rent was very low, and the return to the mill-owner was hardly 2 *per cent.* In certain counts of yarn Japan was already a successful competitor with India in the China markets. An 11 hours' day would increase the cost of production, and from the commercial point of view the Indian mills would be at a further disadvantage. He advocated the restricted working day from the humanitarian point of view. His proposal would not, if accepted, lead to the closing down of the mills, which would still be able to make fair profits. He could not say that he had noticed any deterioration in the health of the operatives. His Kurla mill was isolated, and the hands resided close by. They would not leave to go to a Bombay mill unless tempted by very much bigger pay. Witness disapproved of the compulsory Sunday holiday, and considered that, on the whole, the present arrangement had worked satisfactorily. The hands were paid once a month, and the owners were generally one month in hand with the men. They did not allow the jobbers to give loans to the workmen. They had also established grain depots which keep the men out of the hands of the *saukar*. The men could buy grain at 10 *per cent.* below the market rate, and the depot was patronised by the majority of the hands, who took their wages partly in tickets for grain and partly in cash. He considered it necessary to keep the men several weeks in arrear with their wages. At Ahmedabad the system was to pay bi-monthly, this dislocated work twice a month, and was nothing like so satisfactory as the Bombay system. The labour problem was more acute in Ahmedabad than in Bombay, and he thought that the main cause of that was the bi-monthly system of payment. In his opinion the supply of labour was not sufficient to keep pace with the increase in the number of spindles. The general scarcity of labour had made the men independent, and they had not improved in skill as a class. If a workman left without notice, his wages were forfeited The eight hours' working day continued for three or four months. In Bombay several mills shut down, and others worked fewer hours still. He objected to a jobber lending money to the men, because sometimes he would allow an inefficient man to work. He considered that Japan had ousted India from the China markets in 16*s* and 20*s*. The Japanese yarn was superior, but so far as prices were concerned, Japan did not undersell India. It did not, however, pay Japan to spin coarse counts, and so in those the Indian mills had the field to themselves. In fact, so long as the Japanese did not have the cotton close at hand, they would be unable to compete with India in the coarse counts.

Note.—A statement, prepared from the firm's books, is appended, showing the number of absentees in one month.

Name of department.	Total number of employés.	Present throughout the month.		Absent for 1 to 3 days.		Absent for more than 3 days.	
		Number.	Percentage.	Number.	Percentage.	Number.	Percentage.
Spinning and cording—adults .	1,082	186	17·1	498	46	393	36·7
half-timers	538	295	54·8	162	30·1	81	15·00
Weaving	905	142	15·6	434	47·9	329	36·3
Reeling	640	119	18·6	369	57·6	152	23·7
Total ...	3,165	742	23·4	1,463	46·2	960	30·3

WITNESS No. 63.

Mr. Dhirajlal Bhimbhai, B. A., managing agent of the Goolam Baba Spinning and Weaving Company, Limited, Surat.

Mr. D. Bhimbhai. *Written evidence.*

The mill which I represent contains 15,312 spindles and 280 looms. The average number of workmen employed is as follows:—

men	...	...	511
women	...	...	53
children, boys		...	51
,, girls		...	56

The factory has been working during the last ten years in the day time only, *i. e.*, from sun-rise to sun-set. In the months of May and June when the days are long the factory worked for 13 hours and 12 minutes, and when the days are short it worked for 10 hours and 50 minutes. The working time includes 30 minutes rest allowed at mid-day. The present system of working from sun-rise to sun-set is suitable in every respect, especially as it is quite in consonance with the habits and customs of the workmen in this district. Though intelligent enough they are not steady workers, being somewhat idle and easy going, and this, I believe is due to the enervating influence of the climate in tropical countries. In fact they are sadly wanting in that physical vigour and ability which form the main characteristics of the labouring classes in the temperate zone, and the result is that the labour in this country is by no means as efficient as that in cold climates. Climatic and humanitarian considerations alike incline me to think that the practice of keeping labourers at work at night time by the introduction of the electric light is not quite desirable, although it may tend to increase production so as to enable factories to keep abreast of the demand, and it may even benefit the labourers from a pecuniary point of view. The practice in question, if resorted to otherwise than to encounter sudden and unexpected calls, produces in the long run the disadvantageous consequences noted below:—

(*a*) The wastage percentage would increase to a great extent.

(*b*) The production would be comparatively unsatisfactory both in point of quality and quantity.

(*c*) The machinery would get easily depreciated.

(*d*) Workmen would get easily tired and would not be inclined to pay constant attention to their work. Their health would be seriously affected by want of sleep and rest.

The working hours of adult males should not be restricted. The physique of workmen is not at all affected by the present system of working, *i. e*, from sun-rise to sun-set. The workmen are not the least inconvenienced by their having to work under the present system. They get ample time for rest. As soon as the workmen enter the mill premises they first of all go to their appointed places and put the machinery in order. Then after half an hour or so they are allowed to go out of their rooms one after another to obey the calls of nature. This takes up about 15 or 20 minutes. During the absence of one man his neighbour minds his work. Then again they take breakfast and while away some time in connection with it between 9 and 10 A.M. The mid-day general rest then supervenes, and work is resumed after the lapse of 40 to 45 minutes. Even when engaged in work the individual workmen are not precluded from going out to drink water, to have a smoke, and to go to the latrines and urinals, which occupies 10 to 15 minutes. This they do twice, thrice and some times four times. Before closing the workmen generally go out and wash their hands and feet in order that they may go home refreshed. The interruptions in work in the case of each workman, exclusive of mid-day rest, amount on the whole to more than one hour and a half. Having regard to climatic considerations, and the general habits of workmen, the owners of factories have no alternative left to them but to allow some latitude to mill hands in these respects. Any change in the present system cannot but prove highly detrimental to the interests of both employers and employed.

(*a*) There would be a great lack of workmen.

(*b*) The workmen would get proportionately less pay, as many of them are on piece work. In this case they will be tempted to go to other factories, changing their names and addresses, where the other factory works by electric light. Thus the evil sought to be remedied would be aggravated.

(*c*) The factories would suffer owing to the decrease in production.

(*d*) The average cost of production *per* lb. will increase, as the standing expenses will remain the same.

(*e*) Should the workmen get less remuneration for their work as compared with other sorts of labour, they would naturally be tempted to give up this class of labour. In order to induce them to stick to it, the factories will have to pay them at the ruling market rate for doing less work.

The mill industry has to cope with adverse circumstances now-a-days. The prices of store articles and fuel are very high. The Indian cotton market is dependent on the conditions of American cotton market, and so the prices of Indian cotton are high. The Indian yarn market is dependent on the China yarn market, which has gone down owing to the fall in silver, and other miscellaneous causes. The Indian cloth market depends on the consuming capacity of India itself. During the prevalence of famine and plague the demand for cloth is reduced, prices decrease, and the factories cannot work profitably. The maximum working time in long days in summer is 13 hours and 12 minutes, and 13 hours may therefore be adopted as the working time; but in winter when the days are short the maximum time may be allowed to be made up with artificial light. The mills burdened with huge debts at present would thus in some measure be enabled to cope

Mr. D. Bhimbhai.

with some mills not so situated. If the above suggestion be accepted, I would propose that a full rest of 30 minutes be given twice, *i.e.*, from 10 to 10-30 A.M. and from 2-30 to 3 P.M. This would, I think, have the effect of rendering workmen more steady and punctual, at the same time it would take away from them the temptation to leave work on various pretexts. The employers and the employed would in that case be equally benefited; the former by increase of production and the latter by earning good wages. The engines would, of course, have to be stopped for half an hour each time, but the workmen need not be allowed to go outside if the compounds are sufficiently large for the refreshment shops. The present system of regulating the employment of young boys and girls above 9 and under 14 years is not open to objection. These people have to work for 6 hours only, which is not unreasonable. The children work with delight, as they have to do very light work of fetching 5 or 6 pounds weight from one place to another and of filling and emptying baskets of the same weight. The creation of an intermediate class will only cause confusion. It is advisable to keep a register of all workers under the age of 16. The employment of women at night should be utterly prohibited. The minimum age at which children are allowed to work in factories may be raised to ten years. The certificate of both age and physique from the Civil Surgeon need not be insisted upon, but only the age certificate. The necessity of producing a physique certificate would, if insisted upon, it is feared, create delays and cause inconvenience to all concerned, besides leading to abuse of the law. The employers themselves would scarcely think it worth their while to employ persons of poor physique. The workmen, if they are unfit, will never come. The half-timers on reaching the prescribed age may get the certificates renewed. It should be prescribed by law that children should be employed in regular sets, *viz.*, morning and afternoon sets. There is no necessity to give elementary education to children in factories. I entertain grave doubts as to the advisability of imparting such education to children of the labouring community at the cost of the factories. It would simply tend to raise their ideas above their standard, and render them discontented with their lot. After work is over, the children would naturally like to go home and roam about. If they are placed in school for some time before they go to their usual work, or after their work is over, they will feel themselves put in confinement. As they are to work in sets it is not advisable to call them sooner than the appointed time. In the present set system children occasionally go out and play when the doffing work is over. Formerly there was a school when the work was arranged for every alternate 3 hours. It was simply a farce, and children of one set were often made to work in excess of their legal hours when the relieving set happened to be deficient. Non-working children should not be allowed to accompany their relatives to dangerous and unhealthy parts of factories. It would not be at all difficult for factories to enforce such a prohibition. In India there are different degrees of temperature in different places. Bombay has more moisture in the atmosphere than Ahmedabad. In dry seasons there ought to be artificial moisture either by humidifiers or by steam. It must be left to the discretion of the factory managers and owners to keep ventilation, light and the standard of moisture required for carrying on the work of spinning and weaving. There is no necessity for prescribing a standard of moisture for the air of working rooms. The mills are in no way inferior to the dwelling houses of factory hands. The enactment of any such rule would lead to grave abuses, and enable the factory overseers to convert it into an engine of oppression. A standard of purity might be fixed for the water used for humidifying purposes. The standard of latrine accommodation might be raised to one seat for every 25 workmen, 2 children to be taken as equal to one adult. The provision of separate urinal accommodation might also be arranged. All doors of working rooms should open from inside outwards. The doors may be locked inside, and the keys may be kept in glass cases The precautions taken at present for fencing machinery are enough. Uniformity as to working hours, age, latrine accommodation, children's set system of working, might be secured by legislation for the whole of India. The appointment of a special staff of full-time medical inspectors is not called for. The present staff do their work satisfactorily enough, only some special allowance might be allowed to them for every visit paid by them to factories, over and above the periodical quarterly visit. The remarks and figures given below show the effect of working days of varying length on the production *per* spindle of fine yarn, on waste, and on the economical working of the factory.

Warp 24.

		Gross *per* spindle.	*Per* hour *per* spindle.
10 hours	Including rest.	3·50	·35 oz.
11 hours		3·85	·35 „
12 hours		4·20	·35 „
13 hours		4·66	·36 „

Weft 40.

		Gross *per* spindle.	*Per* hour *per* spindle.
10 hours	Including rest.	1·62	·16 oz.
11 hours		1·78	·16 „
12 hours		1·94	·16 „
13 hours		2·12	·17 „

There would be no appreciable change of percentage in waste if 13 hours working were allowed. There will be a greater percentage of waste in night work. A reduction of working time from 13 to 10 hours would necessarily raise the cost of production especially as the ordinary expenses would remain as at present. The rise in the cost of production would certainly affect the prospects of the employers of labour, and deprive poor workmen of the means of earning their livelihood. As a rule no half-timer should be deemed eligible to work as an adult without the production of an adult age certificate. The age certificate ought to be given within one week from the date on which the half-timers present themselves for examination before the Civil Surgeon. The practice of

permitting half-timers to work as adults pending the issue of an age certificate is liable to be abused and ought not to be sanctioned. The production of a certificate of physical fitness ought not to be made compulsory, as it would open a wide door to fraud and place both employers and employed at the mercy of the medical department, which cannot be said to be quite immaculate. I am not in favour of the creation of new class of "young persons." It is unnecessary in India, because persons of 15 and above get full-time wages for labour of other descriptions: and they labour for the whole day, and do as much work as the adults. The work in factories is not more difficult or troublesome than labour of other kinds. The imposition of any restrictions in the shape of definite time limits as to the employment of labour in factories cannot but be a matter for deep regret so far as India is concerned. The cotton industry here is still in its infancy, and needs special fostering. Though dictated by a sincere desire to promote the welfare of humanity, the placing of such a restriction would, it is feared, give rise to an erroneous impression that the action is really designed to handicap the growing industry of India in the interest of Manchester. There can be no reasonable objection to fix a maximum number of hours, it being left to the discretion of each individual employer to settle the time for commencement and termination of the day's work. This is absolutely necessary in the case of India, where the range of choice is very much narrowed, under the operation of the caste and agricultural system peculiar to it. There is no necessity to bring inspectors from the United Kingdom. It will be a useless and unproductive waste of money. The present system of inspection is preferable. Whatever necessity may exist in crowded cities for the proper housing of factory hands there is none at all for making any such arrangement in the *moffusil*, where labourers own good houses of their own, and enjoy the benefit of pure country light and air. Factories ought in my opinion to be closed for as many days as there are Sundays in a month, it being left to the discretion of the employers to substitute any other days. In conclusion I beg to state once more that if working hours are restricted to 10 hours the Indian cotton industry will be utterly ruined, and many concerned in this industry will be put to great losses, and the consequences will be very serious.

Mr. D. Bhimbhai.

Oral evidence.

Witness stated that there were 20 gins at his mill, and he paid 4 annas for a 12 hours' day. Should a night shift be necessary, he obtained extra workers. The mill worked from sunrise to sunset; if a fixed 12-hour day were introduced, then he would have to instal electric light. He employed Mahomedans chiefly for weaving, and *dhers* in the spinning. Each man went out four or five times a day, and in order to stop this he had issued 12 *per cent.* of passes. They went out equally as often in the cold as in the hot weather. A weaver in charge of two looms earned Rs. 20 a month. A spinner only received half the pay of the weaver, and a half-timer about Rs. 3. He had tried without success to induce the *dhers* to take to the looms. There were native-made hand-looms, of an antiquated type, in Surat, worked in private houses by Mahomedans and *khatris*, males and females. Mahomedan women, in his opinion, would not work in the weaving shed with the men. The *dher* women worked in the winding and reeling departments, the males in the carding, and both in the roving and drawing. He had not tried women in the weaving department. His mill sold its cloth in Calcutta, and the *swadeshi* movement had been helpful to them to a certain extent. When the mill came under his management four years ago, there was no weaving shed. He put in 240 looms two and a half years ago, and this year he added 80 looms. They had now as many looms as the spinning machinery could keep going. Since the *swadeshi* movement the demand for their cloth had increased, and their price had gone up in proportion to the English price. There was no demand for their cloth in Gujarat where the people wore English *dhotis*.

Witness No. 64.

Mr. Sorabji M. Rutnagur, editor of the Indian Textile Journal, Bombay.

Written evidence.

I have been connected with the textile industry for 25 years, and have worked in the different departments of a cotton mill as apprentice, assistant and manager. Since 1889, when I started the Indian Textile Journal, I have been brought into close contact with mill agents, managers and work-people. I have carefully studied the conditions of labour in mills, and am of opinion that the hours of work of the adult male should be limited, as his physique is affected by long hours. His work requires constant attention, if not great skill, in every department. It is to a great extent on account of this incessant attention, in a stuffy atmosphere, that he feels tired and thirsty, and seeks a change in the fresh air, which the mill agent calls *skulking*. Similarly, the change to his native country is often resorted to to regain health and strength, though, no doubt, some go to attend weddings or for other purposes. The electric light was originally introduced to illuminate insufficiently lighted rooms and corners in the early mornings and before dusk. Its use on a large scale and for overtime work was adopted only a few years ago to meet a temporary extra demand for yarn, and its continuance or otherwise will depend upon the convenience or gain of the mill-owner and not on the demand or welfare of the labourers, whose household is necessarily upset by the late hours at which the adult member returns for his meal and rest. My remarks are particularly applicable to the mill-hand in Bombay, where the general health conditions owing to a variety of causes, natural and local, have to be carefully observed. The mills have worked equally satisfactorily, and have paid well in previous years, when the working hours depended entirely on daylight; and I am aware of mills which even now have no electric light, and which work well, and whose hands do not strike work or demand longer hours of work. I do not think the adult mill-hands as a body insist upon longer hours of work; and if their hours are restricted by legislation, the mills, in my opinion, will work with better regularity as the uniformity of labour conditions will have a beneficial influence on the mill-hands, who have now to submit to the vagaries of their employers during healthy or unhealthy periods, and during all seasons, without any appreciable gain. The trifling extra money they get for overtime is generally spent in drink or dissipation. In case of legislation, definite time limits should be imposed beyond which no operative could be legally employed and in this case the legal working hours (except when working by shifts) should be preferably from 6 A.M. to 6-30 P.M., the engine being stopped for half an hour between noon and 2 P.M.

Mr. S. M. Rutnagar.

Mr. S. M. Rutnagur. I do not think it advisable, nor it is possible, to create a class of "young persons" and regulate their hours as has been proposed. The employment of women at night should be prohibited. The minimum age at which children are allowed to work in factories need not be raised beyond nine. Certificates of both age and physical fitness should be required before children are allowed to work in factories. It will be desirable and conducive to discipline if children who had previously worked half-time were examined for age and physical fitness before being allowed to work full-time as adults. It is desirable to employ the children in regular sets, but any strict legal restriction will not be necessary if better control is kept by the inspectors on their movements. Factory owners should not be obliged to provide elementary education at their own expense for children working in their factories. The rule prohibiting non-working young children from accompanying workers to dangerous or unhealthy parts of factories should be enforced by the mill-owners themselves, and not by legislation. Full-time inspectors should be appointed for securing the due observance of the Act. They should consist of medical men, as also of practical men thoroughly conversant with the general working of Indian factories. Their pay should be good, and a whole-time chief inspector, having an intimate knowledge and experience of the working of Indian factories, should be engaged; he need not be selected from the medical profession.

Written evidence. Witness stated that he had been connected with the industry for 25 years. He thought that the mills had recently been working from 5-45 A.M. to 7-45 P.M. (B. T.). With the electric light they were working 14 hours, and he did not think they ever worked more than 14 hours even in 1905. A few mills might have worked for 15 hours in that year. Shorter hours might mean less production, but it would not affect the industry, and if the mill-hands found they were receiving smaller wages, they would work better in order to make up the deficiency. There were also the climatic conditions to be considered. A 12 hours' day would make conditions uniform, and would be popular with the mill-hands. It was only natural that an operative should go to those mills where he could earn most money. Anybody would do that. If a man came home with Rs. 13, and found that his neighbour had Rs. 14, he also wanted to work the extra time for the odd rupee. Witness was convinced that the operatives would obey the law, and would submit to a 12 hours' day, if it were imposed. They had no organisation; but they had strikes over little things, chiefly owing to the fact that the mill agent did not come in such close contact with the people as he ought to do. The hands could not force a mill agent to work his mill only 12 hours. There might be combination in the *chawls* or in individual mills, but there was no proper general combination. Even before 1905 the general opinion was in favour of short hours, as could be seen from opinions expressed in the *Indian Textile Journal*. He remembered the strikes of 1905, and thought that the men had their way in several mills. Operatives proceeding home broke the windows of the mills where other mill-hands were working by electric light, but this only happened in a certain district. It was quite possible that a few men asked the agent to work longer hours in order to earn higher wages. The men would not strike now if their hours were reduced, assuming that all the mills paid at the same rate. The output might be a little less, but the reduction in wages would not be much. He considered the statement that the hands were nearly all in debt exaggerated. They were paid better than the ordinary labourer, and should be well off; but in Bombay the cost of living had increased, and the men could not save. Out of such a large number of people it was only natural that some should be in debt. If the elderly people retired to their own country it was not necessarily to live on their own savings, as often the sons sent remittances to their parents. He objected to the proposed "young persons" class and would much prefer the working day to be restricted by law. The mill would have to stop at the hours of the young persons, and the result would be the same: but of the two proposals he would prefer directly to restrict the working day. In his opinion there was not enough supervision in the mills; young fellows would be smuggled in as adults; and the newly created young persons class would automatically develop into adults. Detection would be difficult, and the new class would create great confusion in the working of the mill. It would be impossible to have hundreds of people undergoing such an examination as was proposed. He saw no danger in interfering with the hours of adult labour. In order to obtain uniformity in the age examination, he approved of the appointment of one whole-time medical officer. He would have a strict physical examination before the child commenced working at nine years of age, and if there was to be a second examination at 16 years, he would not have it so rigid as the first one. With the better supervision that would follow the introduction of a new Act, he thought children could work their sets all at once, without fear of being kept by the jobbers. At present the jobbers only took the children when the supervision was defective. It would be better if it could be so arranged that one set should leave the compound before the second set came in. He did not approve of legislation on this point. The jobber, however, was always ready to take the children, and that danger must be guarded against. Witness did not think that any provision for education was necessary. He would leave the time of the sets to the convenience of the mill-owners. At present ventilation in mills was very defective. He approved of the fixation of a standard of purity of air, but thought that a humidity standard was impossible for India. If the tank water was not foul, it might be used in the humidifier. With separate urinals witness thought that the present number of latrines was sufficient. He approved of exemptions being made in the Act to cover those people who would have to work over 12 hours for legitimate purposes. So far as the 12 hours' day was concerned, his opinion applied only to cotton mills. He could not say anything definite about other factories. His objection to the "young persons" class was also based on the ground that he did not think there could be proper supervision when these immature adults went from mill to mill. The Indian hand was migratory, and these young persons would go from mill to mill. If the Government wished to interfere, they should restrict the working hours, because he was convinced it would be impossible to enforce the "young persons class" as a practical measure. Witness commenced mill work at the age of 16, and had eight years' practical work before becoming manager, and he asserted that the men had deteriorated in physique. If the death statistics of mill-hands showed a lower percentage of mortality than among outside labourers, it did not necessarily follow that the stamina of the mill-hands had not decreased. Witness admitted that often the mill was healthier than their *chawls*. A youth of nine was capable of doing 7 hours' work, and when he reached 14 he considered that that youth was able to work for 12 hours. He saw no necessity for a period of further probation, such as the "young persons" class would impose. With shorter hours there would be no overtime, and

wages would be readjusted, thus bringing the mill-hands back to their old position prior to the introduction of electric light In the meantime the necessaries of life had increased in price. Witness, however, thought that there was a sufficient margin of profit to enable the mill-owners in a case like the present to pay the men their long day wages for the 12 hours' work. If a depression in trade should come, then the men would necessarily have to submit to shorter hours. At present the overtime money was spent in drink and dissipation, and generally speaking it would be no real hardship to 75 *per cent.* of the hands if this money were taken away. He thought that the extra one or two rupees were always wasted, and if they had not the surplus cash they would not drink. He thought that on a new operative's first pay day some jobbers received Rs. 2 out of every Rs. 10 that the man had earned. There would be no payment on the second and succeeding pay days, because the man would become independent. It was possible that a weaver paid Rs. 5 for his place at the loom. The operatives had of course to keep friendly with the jobber, both socially in the *chawls* and from the working point of view in the mills. There was an utter lack of supervision in the Bombay mills. He attributed the lack of discipline in the mills to the fact that the owners themselves had not been brought up to the practical working of a mill, and they had to depend entirely upon their managers and jobbers. A responsible and good manager might occasionally be found, but even that man would not act independently of his master for fear of losing his place. In the average 13 hours' day, he estimated that the men took 2½ hours off, but owing to their neighbours attending to their work, the mill production did not suffer and the argument about loitering lost its force. Extra hands were not employed to make up for those hours taken off. During a 13 hours' day in the Indian climate a man was necessarily bound to leave his work at least four times for a drink, etc., and they must allow ten minutes each time to enable the man to cross the compound and return. With shorter hours the men would go out less in proportion, but they would always go out just as they wished. The mill-owners said that they suffered in production through this habit of going out, but witness contended that this was not so, otherwise the owners would not be making these handsome profits for 9 hours' actual work. Whilst the man was away his machine was at work. The men had a sort of informal shift system. With the shorter day witness was convinced that the total output would not be materially diminished and the quality of the work would be improved. Mr. Ratnagar.

WITNESS NO. 65.

Mr. N. N. Wadia, Bombay.

I represent the Textile Manufacturing Company, Limited, and the Bombay Dyeing and Manufacturing Company, Limited. The number of men, women and children employed in each mill is as follows:— Mr. N. N. Wadia. *Written evidence.*

Textile.	*Bombay Dyeing.*
2,390 men.	585 men.
359 women.	75 women.
68 children.	12 children.
2,817 total.	672 total.

The average daily number of hours, for each year during a ten-year period, has been as follows at the Textile mills:—

Year.	Average number of hours worked.		Year.	Average number of hours worked.	
	Hours.	Minutes.		Hours.	Minutes
1896 ...	11	45	1902 ...	12	21
1897 ...	11	50	1903 ...	12	27
1898 ...	12	0	1904 ...	13	0
1899 ...	12	0	1905 ...	13	25
1900 ...	10	4	1906 ...	12	0
1901 ...	12	10			

The Bombay Dyeing and Manufacturing Company, Limited, have worked regularly ten hours a day (actual working hours) during the last ten years. I trust the Commission will be careful in judging the facts from the evidence produced before them only, and not be influenced in any way by the agitation of labour Members of Parliament in England. The composition of the Commission, however, gives one an assurance to that effect. I am unable to give definite statistics showing the effect of working days of varying length on the production *per* spindle, and on the economical working of a factory. The only long periods during which textile mills worked for long hours were when we experienced great scarcity of labour, but my own view is that, provided we can get sufficient and effective labour, and men are kept to their machines, the outturn *per* spindle and loom during 12 hours will be nearly the same, and the waste less than in 13 hours under present conditions. I am of opinion that a reasonable limit of eight days should be allowed within which an employé should be allowed to work pending examination for a certificate. I think if full-time medical inspectors of factories are appointed, and if they visit the mills as at present every 10 days, it will meet all requirements for speedy examination. I agree that certificates of age and physical fitness should be required before half-timers are allowed to work as adults. I am, however,

Mr. N. N. Wadia.

opposed on principle to interference in any way with adult labour as regards the physical fitness of an adult after he has attained the age of 16; if he is refused mill work, he will be forced to undertake more arduous work at the docks or elsewhere to earn his living. The only safeguard I can suggest to prevent half-timers who are refused certificates as adults in one factory from working at another mill is to attach a copy of their photograph to their certificates, as thumbs marks or face marks described in the certificate are not distinct enough, and are liable to be abused. On principle I object to any restrictions on the hours of adult persons, as it more or less interferes with the free will of such persons. I have no grounds for saying that the physique of workers has been affected by long hours, as there are no reliable data to judge from, but one seldom sees old men working in the factories. This, and the acknowledged fact that no human being can stand continuous work for 13 hours, and considering at the same time the climate of India, and the ignorant masses of people who for mere greed of money are often led to work 13 or 14 hours, lead to the conclusion that it would be advisable and necessary to protect them against their own greed, and to safeguard their health by restricting the hours of labour of adult males. I would have preferred if the masters had combined and arranged among themselves to observe a uniform working time all through the textile industries, but seeing this is impossible there is no other course open but to regulate the hours by law. Of course a proviso should be inserted that for urgent and necessary repairs in any mill certain men may be worked over the limit of 12 hours' working time, such as the present Factory Act allows on Sundays and holidays Further, the boiler *serang*, firemen, oilers and all engine and boiler house staff should be exempted from this rule, as it is necessary for them to be at the mill before the mill starts work. I think the number of actual working hours should be fixed at 12, and this must be enforced by the actual time of running of the engine. I think the legal working hours should be 12, say between 6 A. M to 6-30 P. M. (standard time), or 6-30 A. M. to 7 P. M., including 1 hour stoppage of the engine between noon and 2 P. M. I do not think there should be any latitude as regards hours of work in factories working on day shifts only. 6 A. M to 6-30 P. M. or 6-30 A. M. to 7 P. M. should be the legal working hours, so that an uniform limit can be established. I am not aware that any illegal employment as adults of persons between the ages of 11 or 14 has been carried on, and therefore I cannot say that any physical deterioration has taken place. I am against the creation by law of a special class of workers called young persons, as this would result in creating difficulties of administration without any practical results. I do not think it is necessary to keep a special register of all workers under the age of 16 I think women should not be employed at night. I am of opinion that the minimum age at which children are allowed to work in the factories should not be raised beyond nine. Certificates of both age and physical fitness should be required before children are allowed to work in the factories. Certificates of both age and physical fitness to work full time should be required before children who have worked half time are allowed to work full time as adults, if examination for the same is carried out in a thorough manner by the certifying surgeon. This will give the certifying surgeon power to prevent a boy of 14 who is physically unfit from doing an adult's work. But this power should only apply until the boy is 15 or $15\frac{1}{2}$ years of age, and after that there should be no kind of interference with adult labour. I am of opinion that it should be prescribed by law that children should not be employed except in regular sets. I do not approve morning and afternoon sets, by which children are worked 6 or 7 hours without any rest I think half-time children should not be employed in shifts of longer duration than 3 to $3\frac{1}{2}$ hours in the morning and 3 to $3\frac{1}{2}$ hours in the afternoon. I have known of cases where children employed for 6 to $6\frac{1}{2}$ hours in the morning set at one mill go to another mill for 6 to $6\frac{1}{2}$ hours in the afternoon, and it is this that must be stopped by restricting the shifts of children to 3 to $3\frac{1}{2}$ hours' continuous work at a time. I do not see any objection to factory owners being obliged to provide elementary education at their own expense as most mills will find it advantageous to do so. I think it will be a hardship if non-working young children are prohibited from accompanying the workers in the factories, except in dangerous and unhealthy parts of the factories.

Improvements in ventilation are required, but I do not know on what basis this can be arranged. The question of ventilation was fully gone into by a departmental committee appointed by the Home Office in 1903, and they fixed the proportion of carbonic acid gas in factories in England; but the conditions of temperature, better and stronger sunlight, and other circumstances are so different in India that I cannot advise that the same test be applied to Indian factories, or that a standard of moisture for the air in factories, or a standard of purity of water for humidifying, or for steaming, be fixed. I have to suggest that a Commission of say four persons, one of whom should be a specialist of the standing of Mr. Haldane, who acted on the departmental committee in England, and another an architect of proved standing, be appointed to go into the matter before legislation is resorted to. This enquiry may take years, and not to hinder any new Factory Act that may be brought forward, I suggest that it be provided that the Governor General in Council be authorized to make rules and regulations under the Act, after consulting the various bodies that may be affected by the rules. I do not think that the standard of latrine accommodation need be raised to one seat for every 25 workmen. The present accommodation of one seat for every 50 persons is ample, especially in large factories employing 1,000 or more hands. I do not think separate urinal accommodation should be insisted upon as factory labourers of this country do not understand the use of the same. All doors of working rooms in factories should be hung so as either to open outwards in case of fire, or to slide on one side. The Fire Office Committee allow iron folding doors to open outwards in factories or armoured tin-lined fire-proof doors sliding on one side. I do not see that there is any reason why sliding doors should be prohibited. I do not think any special further precautions for fencing machinery than are at present compulsory in cotton mills are necessary. I do not think any advantage will be gained by providing self-locking motions to guards over wheels, and other parts of machines, as is compulsory now in Germany and Russia. where service in the army for three years on the part of all citizens is necessary. I think arrangements should be made to secure uniformity in the administration of the Factory Act throughout India. I think full-time medical inspectors of factories should be appointed to secure the due observance of the Act.

Witness stated that he had nineteen years' experience of the industry. He considered that, with an adequate labour supply, the production would be the same in 12 as in 13 hours, because with the shorter day the men would be more attentive. People might say that these casual habits were engrained in the men, but he thought they would improve. In Russia curtailed hours had effected a wonderful improvement in the workmen's habits, and the production had not diminished in quantity. With shorter hours the Indian labourer would become more efficient, and in the meantime the industry would not be injured to any material extent. Witness did not see why the prosperity of the Indian mills should depend entirely on the conditions in China. He thought that the bulk of the mills were becoming independent of the China market, and even if there were competition with Japan, there was nothing to be gained by working long hours. The rates of pay had been increased 15 *per cent.* within the last two years. The rise was general all over Bombay. It was due to the scarcity of labour, and he thought that this higher scale would be permanent. Up to June 1907 his mill was the only mill which stuck to the old 12 hours' agreement, but in June some of their good hands began to leave for the long-hour mills, and so the Textile Mill worked 13 hours rather than lose all the best of the operatives. Witness approved of 12 hours' work, exclusive of the interval. The present cause of the migration of labour was because one mill was pitted against another. If the hours were reduced, the masters would have to stop the money now paid for overtime. Witness objected to the creation of the "young persons" class. It would serve no useful purpose, and would only be a cause of constant friction between managers and medical officers. A boy with a certificate of 14 might possibly be over 16 years of age. Witness thought that the child of 13 or 14 was more active than the adult of 17, who became lethargic directly he reached manhood. From the point of view of physical endurance there was not much difference between the child of 14 and the adult of 17. This "young persons" class would determine the working hours of a spinning mill, but not of a weaving shed. Witness approved of a standard of purity of air, framed on a scientific basis after careful investigation. In a large factory one in 50 was quite enough latrine accommodation, but in smaller factories there might be occasional pressure with this accommodation. Where there were less than 300 hands, a higher standard might be prescribed He found that the urinals were very little used. He approved of the present long interval for women being curtailed. In his mill the one and a half hours were strictly observed. Their interval should be the same as the men's, and they might also be allowed to work for 12 hours. Witness thought that fireproof doors might be allowed, because they could be easily pushed on one side and could not cause an obstruction. In his opinion the outside iron escapes were also very faulty. While he personally approved of the compulsory Sunday holiday, yet he thought that with an advance in education the Mahomedans might demand that their Sabbath be observed, and one would not know where to stop. He liked the idea of the Sunday free, and the twelve extra festivals as holidays, but he thought that the men would object.

Mr. N. N. Wadia. *Oral evidence.*

Witness No. 66.

Mr. D. M. Wadia, Bombay.

I am the manager of the Bomanji Petit Mills. Altogether 1,842 hands are employed, out of whom 1,552 are men, 200 women, and 90 children. As we have no artificial light installed, we work from sunrise to sunset, and consequently the average number of hours *per* day for the whole year comes to about 12. I don't think there is any necessity to take the extreme step of fixing the working hours of adult males. If it is done, however, then the net working hours must be 12½. The time prescribed should be 6-30 A.M. (standard) to 7-30 P.M. (standard) with half an hour's recess for meals between 12 and 2 in the day. I don't believe in the shift system. However strictly it is enforced, it is sure to be abused; as for instance the shift which worked in my mill in the day time will work in the night time at one of the neighbouring mills. There is no necessity to create a class of "young persons" if the hours for adult workers be restricted. It will disorganise the working of the departments. Besides that, the age of 14 for adults is a suitable one. The employment of women must be prohibited in cotton spinning and weaving mills during the night time. I don't think there is any necessity to raise the age of the children beyond 9. I don't think there is any necessity for a physical fitness certificate. A certificate giving the age and number of teeth is quite sufficient. I don't see any objection if it is prescribed by law that children shall be employed 6 hours a day as under—

Mr. D. M. Wadia. *Written evidence.*

1st shift from 6-30 to 9-30,
2nd shift from 9-30 to 12-30,
1st shift again from 1 to 4,
2nd shift again from 4 to 7.

Elementary education is being given in many of the mills. I don't see any necessity to prescribe this by law. It is very difficult to prohibit non-working children entering the mill premises. Many of them come in on the pretext of bringing operatives' meals. There is no necessity to test samples of air in factories to establish a standard of purity of air. Most of the factories are well ventilated. I don't see any harm in prescribing by law a standard of moisture. A standard of purity may also be fixed for the water used for humidifying purposes. I don't think there is any necessity to raise the number of privy seats. One for 50 is quite enough. Separate urinals should be insisted on. Most of the modern mills have sliding doors. I don't see any objection to doors being made to open from the inside outwards. No further precautions for fencing machinery are necessary. There should be one Factory Act for the whole of India, and the administration should be uniform. I don't see any objection to full-time medical inspectors appointed to assist the present inspectors in securing the due observance of the Act. As I have never worked this mill more than 12 hours, I am not to a position to give any statistics showing the effect of long hours, but I may say from personal experience that the longer the working hours the less the production *per* spindle *per* hour. Children and young adults should be allowed to work for a week without certificates. If full-time medical inspectors are employed then they will be able to visit each and every mill once a week. The law should prescribe that no half-timers are to be employed for more than a week without a certificate for age, &c. As I

Mr. D. M. Wadia.

said above, I am opposed to the creation of a special class of "young persons"; as the lads grow up they have a natural desire to earn more, so they take up employment in other departments, such as weaving, &c. If this special class is created, it means that they must stick to their small salary for a further period of two years. I don't think there is any necessity to get out factory inspectors from England. The conditions of West and East are quite different, and wide as the two poles. I suggest that the factory inspectors should be obtained from among mill managers. Mr. Engel, the first inspector of factories, was a mill manager before he joined the Government service as inspector.

Oral evidence.

Witness stated that on principle he was against interfering with the hours of adult labour, but from the humanitarian point of view he admitted that the health of the operatives was adversely affected by these long hours, and consequently he thought that Government must step in. He did not, however, wish for an extreme step. In some form or another there must be some kind of restriction, and he preferred the formation of a class of "young persons" to work 12 hours a day. This would practically determine the working hours of the mill. A 12 hours' working day would not injure trade. His mill worked the short day, and he did not find this a handicap in the long hours of 1905. In his opinion the production *per* hour *per* spindle was in favour of the short days. He had been in mills where they worked 14 hours, and though the total day's production was greater, yet it was not so in proportion to the extra time worked. His hands remained at his mill in 1905, and after their holidays they would return to the mill. They left mill-work about 45 to 50 years of age, and returned to their land to live on their savings. He did not give higher rates of pay to retain his men during 1905. He used a good quality of cotton, and the men turned out in 12 hours as much work as mills that worked 13 and 14 hours with inferior stuff. They spun from 12s to 32s. The children were properly taught in his schools, but if they did not care to pay attention, they could not be forced to do so. With him it was a genuine attempt at education. It was his opinion that if the children worked all their time in the mill straight on end they would go to another mill for the remainder of the day. So far as health was concerned they could work 7 hours at a time, but it would not do to allow them to leave the mill premises when their work finished. He thought this because it would be difficult to trace the children. He admitted that it was easy for the *mukadums* to keep in touch with the children and find out whether they were attending two mills. If, so, the inspector could be informed and the practice stopped. In his mill the children were not employed beyond their legal time. Even on their half-time pay, the children would work extra time for the prospect of more money. He had seen children brought to the mill by their parents and practically forced to work. The *mukadums* worked in the mills the whole day. If a B shift child was found on the mill premises when the A shift was at work, then that child should be presumed to be at work Mill hands drank a great deal, and 50 *per cent.* visited the liquor shops on their way home, They had their accounts "chalked" up, and settled at the end of the month. The longest day that his mill had worked was 13 hours 15 minutes. He had no objection to the proposed "young persons" working for 12 hours. This would limit spinning mills to a 12 hours' day. It would also affect weaving mills, but in any event they could not weave at night on account of the good quality of work required, and the light difficulty. Again, it would not be economical to run the weaving department alone with the rest of the mill closed He considered that mills were well ventilated, and in his mill he had windows and fans. A standard of purity of air would have to vary for different places in India, but he would have no objection to a clause similar to that laid down in England.

Witness No. 67.

Mr. Bhiwa Ramji Nare, a retired weaving master.

Mr. Bhiwa Ramji Nare.
Written evidence.

I worked in spinning and weaving mills for over 37 years, and always lived among mill-hands. I began work with about Rs. 8 a month, and worked my way up, rising to weaving master in Murarji Mill on pay of Rs. 225. I retired in 1906, and still live among mill-workers. My experience is confined to mills in Bombay. To prevent the tendency of the mill authorities to overtax the energies of their employés, the working hours of adult males should be limited. The physique of workers (even adult males) does to a certain extent deteriorate by working longer hours than 13, though what deterioration is now observed is mostly due to their habits of drinking, to keeping late hours, visiting theatres, and to such other vices as follow the possession of ready cash in the hands of uneducated and thoughtless persons The working hours should be 13, with a recess for half an hour. The same hours of working should be fixed for all the mills at one station, in consultation with mill managers, if possible, so that any breach of the law may easily be detected. The hours should be from 6 A.M. to 7 P.M (standard time). The engine should be stopped for half an hour some time between 12 noon and 2 P.M. The recess should not be more than half an hour, and that only once, though the work-people may be allowed to go for their meals for a quarter of an hour between 9 and 10-30 A.M. If the recess is longer than half an hour, the men would visit liquor shops or engage in other bad pursuits, and often not return to work for the day. It has to be borne in mind that the men do not work continuously for over three hours; they go out either to take their meals, or for a smoke, or to answer the calls of nature, or even for a bath. Their residences are small and insanitary, and the bathing places and latrines there are very dirty. There is very often little or no water in the taps On mill premises water is plentiful, and the latrines comparatively much cleaner. From 3 to 5 *per cent.* of workers are always out in this way. Shift working should as a rule be discouraged It induces work-people to overwork themselves, and thus lose health. It is neither good, in the long run, to the mill-owner or the mill-worker. The quality and quantity of work must necessarily suffer, and, on the side of the workers, it would induce greedy persons to work at night in one mill after working during the day in another mill. They would ultimately become ill and would suffer more than they gain If the shift system has to be permitted owing to some special circumstances, its introduction should require special sanction, and the sanction should not be for more than three months. The working hours for night workers should not be more than half the hours of work by day. Women are mostly

employed in the reeling and winding departments, and some few are employed for cleaning waste. The work of the latter is light, and of the former a little more toilsome The working hours of adult females should be the same as at present, i. e., 11 hours from 7-30 A M. to 6-30 P.M. (standard time), with one hour's recess between 12 noon and 2 P M. Owing to stricter supervision the employment as adults of persons of the age of 12 to 14 is now very rare. In obtaining certificates there is much likelihood, under present rules, of personation being practised, by change of names. This abuse requires to be checked. A full description of the person examined, such as height, complexion, facial description, should be entered in the certificate. A clear thumb impression should also be taken on it. These precautions will have a direct and an indirect effect in eradicating this evil There has not, on the whole, been any appreciable deterioration in the physical condition of the workers, and it is not necessary to create a separate intermediate class of "young persons" It would be preferable to raise the age limit of adults to 15 years. About 60 *per cent.* of mill-workers are between the ages of 14 and 20, and about 40 *per cent.* are between 14 and 16 years If a separate class of "young persons" were created with about 9 or 10 as working hours, the mills would have to close after these hours. This would be a great blow to the mill industry of India. The industry would practically be doomed. There is no objection to a special register of boys and girls under the age of 16 being maintained. This will be useful for exercising a healthy check. The employment of women at night should be prohibited. This prevention is necessary both on the score of morality and convenience. I have no knowledge of the nature of the work which the children are called upon to perform in other factories; but the work they do in spinning and weaving, namely, doffing and winding respectively, is not very laborious The children in both these departments work for about an hour or hour and a half at a stretch, and then they have a rest for more than half an hour. Besides this they pass some time outdoors It is not necessary to raise the age limit beyond 9. A certificate of age is necessary at the time of first employment of children, but in the case of a certificate of fitness it is different. The standard of fitness to do any work varies with the nature of that work, *e g*, a smith, or a fitter, or even a carpenter must have a better physique to fit him to his work than a mill-hand. It is not possible to define this variation in standard by law, but it will have to be determined by the medical inspector. In examining a large number of youngsters these officers will necessarily have to depend on their subordinates Compulsory production of certificates of physical fitness is therefore likely to open a door for corruption to these subordinates, and there is the danger of the remedy being worse than the disease. In their own interest, again, the employers will not employ sickly or emaciated children For these reasons certificates of physical fitness should not be made compulsory. Before allowing a half-timer to work full time, a fresh certificate of age should be required. This certificate should contain all the details mentioned above. Certificate of physical fitness is not necessary. The reasons for this conclusion have already been given. It should be prescribed by law that children should not be employed except in regular sets, and one set for work in the morning and the other in the afternoon would be a good arrangement. This will prevent jobbers from using the same children for work twice in a day The system will also leave sufficient time for the children to rest and to attend school, the morning set attending school in the afternoon, and *vice versâ*. With regard to the education of children working in mills, and of the children of mill-hands, I have special experience I conducted, at my own expense, a night school for these children from 1874 to 1887, in which latter year, with some assistance from my co-workers and other friends, a full-day school was added to it. Both these schools are still doing their work I think the first four vernacular standards as sanctioned by Government should constitute "elementary education." The agency for giving this education should be either the Government, or the Municipality, or any other local body who has charge of the local general primary education. Education cannot be well conducted by any other agency without a strict supervision by the local educational officers These officers may, with advantage, consult the resident factory workers or officers, and thus obtain their co-operation. Perhaps three or four factories may be allowed to join in establishing a school for their employés, but this must be supervised by the educational officers. It should be made compulsory for the children to attend school by making the production of a monthly certificate of attendance at a school a condition of their admission to, or continuance in, a factory Factory owners should be obliged to contribute the whole cost of the education of children working in their factories. The cost would not be very much. The largest mill in Bombay may have about 100 children requiring elementary education. If the school fees of these were paid in an ordinary school, the cost would not exceed Rs. 20 *per mensem*. If three or four factories have a school of their own, recognised and supervised by Educational Department authorities, and receiving a grant-in-aid from that Department, the cost would be still less Children will attend school by shifts, and the teaching agency in ordinary schools required for 50 children would be enough for 100 factory children. The cost to other factories, employing a smaller number of children, would be comparatively very small. I understand that even now there is either a rule or order prohibiting non-working young children from accompanying workers to dangerous or unhealthy parts of factories. If there is no such rule there should be one. The prohibited parts should be specifically defined. The manager of a factory should be personally held responsible for carrying out this and other rules, and the prohibitionwill be roperly enforced. I don't know much about the analysis of air; but I think it will be difficult to prescribe a standard of purity of air which will be adapted to the different local and seasonal conditions, and to the work done in different departments of a factory. What is required is the maximum means of ventilation which would be availed of so as to suit the different conditions existing for the time being. The same is the case with the standard of moisture. In Bombay spinning and weaving mills, steam or water from municipal taps is generally used for humidifying purposes. Mill owners in their own interest will not use bad water for this purpose, because it will spoil their plant and production. It is not necessary therefore to fix a standard of purity for water here. The standard of latrine accommodation should be raised to—

Mr. Bhiwa Ramji Nare

one latrine for every 35 workers up to 500 workmen;

one latrine for every 40 workers from 500 to 1,000 workmen; and

one latrine for every 50 workers above 1,000.

Mr. Bhiwa Bamji Nare.

Separate urinal accommodation should be insisted upon. It is noisome to have to go to a latrine for urinating. Latrine and urinal accommodation should of course be separate for males and females, and should be in proportion to their relative numbers In spinning and weaving mills, except the blow-room and card room, there is not much danger from fire while the work is going on. In the mule and ring frame room heat by friction may produce fire, but water-buckets are always handy there, and the fire is soon extinguished. The blow-room and card-room are generally at some distance from the other departments, and are fire-proof. It may, however, be prescribed that all doors of working rooms should be hung so as to open readily from the inside outwards. The present precautions for fencing machinery are sufficient, especially as no children other than the workers are to be allowed into a factory. The better housing of factory hands is a difficult problem. In the *mofussil* it may perhaps be possible for owners of factories to provide good housing accommodation for their workers, because land is cheap and easily available there. In Bombay, however, with the exception of Greaves Cotton, Sassoons, Currimbhoy Ibrahim, Petits, Tatas, Wadias, Murarji Gokuldas, Khatav Makanji, Jeewraj Babu, Thakarsi Mulji, Adamji Peerbhoys, and some others, who have got land of their own and can build *chawls*, there are a large number of mill-owners who cannot conveniently obtain extra capital for this work, even though they are aware that if good sanitary *chawls* are built there will be a good return from them By an amendment of the Improvement Trust Act, I believe it is now possible to obtain loans from that body for housing factory employés, and I hope, where possible, cheap housing accommodation will be provided for the poor people. From a worker's point of view owners of factories should be compelled to provide housing accommodation, though, for the reasons stated above, I am of opinion that compulsion ought not to be resorted to If three or four mill-owners make a beginning and build sanitary *chawls* for their employés, and let them only to their own people at a little cheap rent, they would probably attract to their factories the best workers, and they would get doubly paid, in rent and in better and more outturn.

As regards the economic condition of factory labourers, it is true that they are on the whole poor, but certainly they are not poorer than other people of their class They get more ready money in their hands, and have a tendency to spend much more than their means would permit, or their position would warrant. If these men got more money than they get now, they would go on spending more and more, so that they would generally be in debt. About half the number of workers are in debt There are about 20 *per cent.* of good exceptions who have provided for old age, and they live happily in their homes, generally in Ratnagiri District. But, as above stated, the majority do not care to provide for the future, but very often draw upon it Their condition would be worse if their income decreased. In 1900, when the mill industry was low, many of the mill-hands were on the brink of starvation. Her Excellency Lady Northcote used to visit these people *incog.*, and gave plentiful relief in grain and money. I myself did some relief distribution work then. Even with such sad experiences the people are reckless. They freely indulge in liquor, visit theatres and other shows, gamble, and take to other vices, and thus wreck their health and wealth All this is due to want of education, and want of knowledge of the value of time and money. The remedy is, therefore, to be found in educating them, and in providing healthy recreations for them. Temperance and hygienic lectures with magic lantern illustrations are instances of this. If philanthropists worked in these directions they will lay this useful but ignorant society under a deep debt of gratitude.

Oral evidence.

Witness stated that he had worked at the Dinshaw Petit Mill and the Morarji Gocouldas Mill. He thought that the ordinary mill-hand could work a 13 hours' day, including the half-hour interval. The operatives worked about 11 hours of that time The ordinary workman went out four to five times in the course of the day. He had consulted the work-people on the subject of hours, and he thought they were equally divided in favour of the 12 and 13 hours' days. There were half for one, and half for the other. If the day were reduced to 12 hours, the men would still idle about, and so lose wages. They were accustomed to go out so many times a day, and they would do so, no matter how much they lost in wages Witness did not think that the hands would lose this habit of going out even if they had shorter hours. Personally he favoured a full 13 hours' working day, exclusive of the interval, and he had no objection to work by electric light. Various mills worked long hours in 1905, and the workmen who went to those mills did so because they wanted to earn large wages He did not approve of the 12 hours' day for women, which would be inconvenient on account of their household duties. It was, however, practicable for women having no children or household work to work at weaving and spinning. Witness admitted that some females had no household duties, and it would be well for them if their hours coincided with the men's hours It was his opinion that when the shift system was in practice men worked in one mill during the day and in another mill at night. The half-timers did not work in two mills, because they were kept in their own mill during the day. It was well known that the jobbers took the children during their interval, and made them work. He thought that the children should be made to attend school. This ought to apply to all factories, and the child should bring a certificate certifying that he had attended his school. From 20 to 25 *per cent.* of the mill-hands saved money, and were able to retire to their country. The average monthly pay was Rs. 15, of which Rs. 6 went in food and lodging The other Rs. 9 were spent by the majority in clothes, theatres, drink and other luxuries. Many of them lived beyond their means, and 50 *per cent.* were in debt Mill-hands were paid about the 20th of the month, but the custom of keeping back their wages was not responsible for their indebtedness. This inconvenience would only occur once. The elderly people retired to their homes when they reached the age of 40 to 45. If they had saved money they followed some small trade, and if not they remained in Bombay, and the children kept them. Witness came from Ratnagiri where there were many retired mill-hands. He had remained in Bombay because his son was being educated there, and he also looked after two schools which he had established where factory children were educated. Witness knew of no person who had applied for work in the mills and been refused. The educated *mofussil* labourer succeeded in obtaining outside employment, but the uneducated man had to work in the mills. Witness admitted that the work-people did pay *dastur* to the jobbers. The amount he understood was Rs. 5 for the giving of employment in both weaving and spinning departments. It took a new hand about two weeks before he could earn money, and his first month would bring him in about

Rs. 8. As a rule the new hands came from their country to relations in Bombay, who kept and helped them to tide over the first few weeks. They did not fall into debt on account of this; the indebtedness came afterwards through extravagant habits. The work-people often came to him and asked for advice and assistance in obtaining mill employment, and he did what he could for them. He had nothing to do with those who drank and lived extravagantly, but he had obtained employment for a large number of poor and thrifty operatives. Witness had seen no deterioration in the health of the operatives. He considered that there had been no injury to the health of the operatives as a class through mill work. Mr. Bhiwa Ramji Nare.

There might be men who had abused themselves, but as a class there was no deterioration. He could not say whether they took drink merely as a stimulant. He attributed the increase in drunkenness to the fact that the men had more ready money in their pockets than formerly, and it was not on account of the alleged exhausting nature of their work. The rates of wages had not increased, but the men had become more skilful and so earned more money. In weaving, a hand was paid from 5 to 12 pies *per* pound according to the quality. Witness thought that more than 5 *per cent.* of the hands were always out of the mill. They took their meals between 8 and 10 A. M., and there was no fixed hour. The half-timer was not capable of working his 7 hours continuously. He approved of their hours being reduced to 5, but it would be to their financial loss. The young adults' work was easy, and they could work 13 hours, but not 14. Twelve hours would be better for them, but again it would mean a loss It would be easy and desirable to pass a rule prohibiting non-working children from entering the mill Mothers had the opportunity of going out periodically to visit their children. In some mills the women did not take their one and a half hours' interval. Those who could went to their homes during the interval, but those who came from a distance had to remain in the mill compound and rest. He considered that the operatives as a class were much more skilful now than when he started, and they were also more attentive. That was to say, they went out just as much as ever, but while in the mill they paid greater attention to their work. The women did not drink. The men often met to discuss questions affecting the mills, but they had no regular organisation, or recognised leaders. Witness once tried to form a society, but the men were suspicious when it came to collecting the funds. Strikes were agreed upon without much thought, and the men would go out mill by mill At present the ring frame boys in one mill were out on strike for an increase in wages consequent on the rise in the price of food-stuffs in Bombay, and so the whole mill was stopped. While the strike lasted a few hands might get employment elsewhere. He thought that a great many mill-hands favoured the 13 hours' day Previously the mills worked 14 and 15 hours, and it was to stop that that intervention was necessary.

Witness No. 68.

Mr. Cowasji Nowroji, supervisor of the Hindustan Spinning and Weaving Mills Company, Limited, Bombay.

The Hindustan Spinning and Weaving Mills Company, Limited, employs 1,132 men, 238 women and 32 children. Mr. C. Nowroji. *Written evidence.*

The undermentioned days over 12½ hours were worked in the last 10 years from July 1896 to June 1906:—

	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.
Days...	156	106	102	129	74	78	79	183	132	233	152

A statement showing the total average number of hours worked during the period is appended. The mills should be allowed to employ working children as half timers and as adults for two weeks at least prior to their being certified, as this is necessary on account of the scarcity of such labour Medical examination in my opinion will be quite sufficient if it is made twice in a month, at intervals of every 15 days, by the certifying surgeon at the mill. I am not in favour of creating a class of young persons, as practically, owing to the large numbers of young persons employed in the factory, any limitation of the hours of work for this class will also compel the adult hands to cease their work unnecessarily, this class is mainly employed in the ring spinning as well as in the carding, as menders, followers, tenters and doffers, etc. The probable number in this mill of the aforesaid class is about 207. The working hours of adults should be subject to no restriction. If they are restricted to the hours from sunrise to sunset, this will suit everyone all right. If it be decided to restrict hours, I would suggest 12½ hours, including the recess of half an hour between the hours of 12 and 1 o'clock. It should be left to the discretion of the employers to begin and end the work at the hours they wish within the fixed limits. I am of opinion that some concessions should be allowed to factories when unforeseen accidents take place, or strikes of the hands, or stoppages owing to the replacement of prime-movers, etc. The suggestion to obtain inspectors from England is not approved, as such inspectors are not properly experienced as regards the climate, or the habits of the Indian working classes. Such experienced men of India as are conversant with the Indian factories and Indian climate should be appointed. There should not be any more stringent law than that now existing. It is not advisable to maintain any special register for "young persons" between the ages of 14 and 16. Their work is not of a continuous character, and there is, therefore, no need to enquire as to their physical fitness. All women require full rest at night. Their night employment should therefore be prohibited In my opinion the standard of nine years as the minimum age of working children is quite adequate and requires no raising. Hardly any children work continuously for more than four hours in a day. Two weeks' time should be allowed for them to obtain certificates of age and physical fitness, during which time they can safely work without any prejudice whatever. It is most inconvenient to factories employing such labour if they are prohibited from working children before being certified. Further, certificates of age and fitness should be obtained before half timers are employed for full-time work. There is already a practice of employing half-timers in regular sets, hence I do not think there should be any further special law to this effect.

Mr. C. Nowroji

It is desirable that factory owners should provide elementary education at their own expense for half time children. Non-working young children are usually not allowed to accompany workers. As they are always stopped at the main entrance gate, no rule is required if this principle is strictly observed In my opinion a standard of moisture is desirable, it should be fixed after carefully testing the atmosphere of the factories. The existing standard of accommodation for latrines, *viz.*, one seat for every 50 persons or workers, is quite sufficient, and it is not advisable to increase it. I never saw workers waiting for want of more accommodation I agree that the doors of working rooms should be hung so as to open readily from the inside outwards in case of fire. It is not desirable to adopt any further precautions for fencing machinery, the existing rules are adequate. Arrangements should be made to secure uniformity in the administration of the Factory Act throughout India. It is advisable to have full time medical inspectors in Bombay Island as the number of factories exceeds that of any other place in India. The full time medical inspectors will be a good help to the present inspectors.

Statement showing the working day and hours, with the average of the daily working hours.

Year, July to June.	Working days total.	Hours total.	Average hours per day for each year.
1896-1897	307	3,732	12
1897-1898	310	3,706	12
1898-1899	298	3,566	12
1899-1900	309	3,719	12
1900-1901	267	3,176	12
1901-1902	308	3,673	12
1902-1903	312	3,783	12
1903-1904	311	4,133	13¼
1904-1905	312	3,999	12¾
1905-1906	309	3,958	12¾
Total ...	3,043	37,450	12$\frac{18}{60}$

Statement showing the production for days of varying length.

Working day of	Average *per* spindle.	Waste Percentage.	Period.
12 hours	5·81	.....	January, February, November, December 1906.
13 hours	5·84	.....	May, June, July.

NOTE.—This statement includes all yarn—fine and coarse—and is for both ring and mule spindles.

Oral evidence.

Witness stated that he had been for 29 years supervisor of the Hindustan Mill. They only used electric light towards dusk. In 1905 they worked up to 8-30 P. M., which made a 14-hour day. He did not approve of these long hours, but the state of the market was such that long hours were necessary. If the China market became brisk again the agreement of the Mill-owners' Association would prevent more than the present 13 hours being worked. He agreed that the operatives would not work continuously for 14 hours a day without injury to their health, and he thought from 12 to 13 hours quite sufficient. Uniformity of hours, however, among factories could only be secured by legislation. The output *per* spindle *per* hour was about the same in the short days as in the long working days, and if there was a little lower average output in the long days, this was attributable to the inferior kind of cotton used. He considered that the operatives could work 12½ hours, excluding the half-hour interval, without injury to their health. In his opinion mill-hands had not deteriorated in health. He could not say that as a class they had become more skilful. The machinery had been improved, which had led to a larger production. The rates of pay for piece-workers had not been changed since 1906. On one occasion the boys struck and asked for similar wages to those paid in mills where electric light was used. Although these boys did not work after sunset, yet they compared themselves with the workers in those mills which worked up to 7 p. m. Witness did not think it advisable to work such long hours, and so increased their rates of pay to quiet them If the hours were reduced, he did not think that the men would apply themselves more and so earn more money. They were very slack in their habits. His mill was short of hands. The operatives were quite independent and combined for strikes. By the rules of the Company, as posted on the walls, if a hand leaves without notice he forfeits his pay. The operatives, however, would not recognise this regulation, and had gone to the courts where they had won. In his opinion the mill-owners required protection against the operatives. Witness gave one month's notice, or if he wanted to expel a hand he paid him one month's wages. According to the rules one month's notice on either side was necessary. The mill had a dispensary, and he thought that the patients were mostly fever cases. The operatives took from two to three holidays a month, and as a rule visited their homes once a year. He had had workers

in his mill for twenty years, and it was possible that the old people retired to their country. In his opinion a 12½ hours' day would not hurt the industry; on the contrary it would improve it. The hands would be more regular, and more attentive and healthy. Personally he preferred from sunrise to sunset, for otherwise electric light would have to be introduced. He did not think that the longer hours in the hot weather were more exhausting than the shorter cold weather days, because the hands always took what rest they required If the 12 hours' day was fixed and there was an improvement in the China market, the mills could meet the demand by increasing their number of spindles The scarcity of labour absolutely prevented all thought of relays. He thought that children from 9 to 14 years of age, and young adults, were quite capable physically of doing the work they were called upon to do. He agreed that the doctor should be required to enter the distinguishing marks on the age certificates. The doctor came twice a month at Rs. 10 a visit, and occasionally the children were employed for a few days before being presented for age certificates. They only employed such children as half-timers as they knew were bound to be over the required age, and in some cases they examined the teeth to arrive at a rough idea as to age It was his opinion that when a mill had been stopped for several days in a month, the owner should be allowed to make up time by working one holiday *per* week. There was a school at the mill, and the children willingly attended. They were taught elementary knowledge, and in time he thought that education would make them more intelligent operatives Restricting the working hours of "young persons" would affect the spinning mills, and not the weaving mills

Mr. C. Nowroji.

WITNESS No. 69.

Mr. Sorabi Cooverji Contractor, Surat.

I am the owner of a ginning mill known as the "Sayan Ginning Factory" at Sayan in Surat District. The number of workmen employed in my mill has been about an average of 90. The ginning mill usually works for about four months, from February to the end of May, but if the season is favourable, and the crop a big one, the factory works about a month longer. Sometimes some of the gin owners work their factories from November or December by bringing cotton purchased from other districts where the crop is early, and thus their working period might come to nearly 6 or 7 months. The usual hours during which the ginning mill works are from 5 o'clock in the morning till 1 o'clock at midnight, when the season is in full swing. The average number of hours of a person employed in the ginning mill is 19 or 20. The workmen have no interval of rest I sincerely approve of the proposal to bring ginning mills and presses under the Factory Act I have fully stated my reasons at length in a memorial submitted about 16 months ago to the Bombay Government (a copy is annexed). I approve of the suggestion to prohibit the employment of women on night work, but it is impossible to get male labourers to work at night in place of female labourers, and I say from my long experience that women only are suited for feeding the gins, and they should be employed in different gangs during the day and night The women workers of the first gang should be employed from 6 o'clock in the morning till 6 o'clock in the evening, with half an hour's complete rest by stopping the engine at noon; the second gang of females can join their work after 6 in the evening till any hour near midnight or daybreak. Male workmen should be similarly treated, and there should also be two gangs. The overhead shaftings do not require to be fenced or cased, but the shaftings that work below the gin platform, and on the ground floor, should be fenced and protected, because the space under the gins being very narrow, low and short, workmen who have to remove cotton seed, or those who have to oil the bearings or to put the slipped off beltings upon the pulley, or examine the shaftings, are liable to be entangled in the shafting by their cloths, or by their long hair, and any accident is not visible to those who work on the upper side where there are more workmen, and thus no immediate help is given, while on the upper side there is very little danger, and it is safer. No openers have been used in factories on our side, and I therefore cannot give my views about them. When women have to leave their work they place as their substitutes their children, about 7 years old, on gins, and these children by neglect and ignorance get their fingers and hands caught under the rollers and crushed. Fires sometimes occur by the ignition of a match in the cotton, and by friction, or through defective oiling. As this Commission is appointed for the benefit of the labouring classes, it is essential to take evidence of the actual workmen. The evidence of big people such as the owners and agents of factories would be of no advantage to factory hands, because they have not worked themselves as labourers in the factories, and gained experience of the work. It is therefore my strong and urgent request that the Commission should unexpectedly examine the workmen as witnesses without giving them any previous warning, and thus obtain correct facts as to their real condition. It is complained all round that the labouring class squander money on drink, and thereby injure their health, but they cannot be blamed for this. It is not their fault. All, from the rich to the poor downwards, make use of liquor, and there is hardly any nation in the world which abstains from liquor. Labourers find rest after the fatigue of work by taking liquor, without which they are unable to work. They are refreshed after drink. The country liquor made in India is very strong, and it injures the stomach and liver of the labouring class It is therefore necessary to introduce freely cheap and mild drinks of beer which contain less alcohol, and also lessen the restrictions upon the harmless and beneficial drink—*tadi*. The manufacture of poisonous stuff made of dates and *mowra* flowers should be entirely put a stop to. Twelve hours' work is excessive for the labourers. Generally the working office hours in all Government and private establishments are from 6 to 8 hours. Why should the mill hands be compelled to work for 12 hours? It is necessary to fix the time for mill-hands at less than 12 hours. The mills sholud be made to start work in the morning an hour after sunrise. Immediately on leaving bed early in the morning the anxiety to run in haste for joining the employment produces a bad effect upon the health of the workmen. An hour's rest is needed to refresh in the morning after awakening from sleep. There should be one system of weekly payment of wages. By the practice of monthly payment little is left in the purse of the workmen, and thus they have recourse to greedy and oppressive usurers and money-lenders, who lend money at exorbitant rates of interest, and thus the poor workmen are left in an impoverished state, and their

Mr. S. C. Contrac
Oral evidence.

Mr. S. C. Contractor. hard earned income is all swallowed by the money-lenders. I am of opinion that it is useless to enforce legislation upon those factories which employ 50 labourers or upwards, because by keeping the limit of 50 men, the owners of presses will escape from the Factory Act. At present the presses employ from 40 to 60 men, and the press owners will endeavour to keep the number below 50. It is therefore advisable to reduce the limit from 50 to 30. The Act should be made applicable to ginning as well as pressing factories.

Enclosure.

To the Chief Secretary to the Government of Bombay,

Bombay.

Sir,

There is a large number of cotton-ginning factories in Surat and Broach districts for which there is no Factory Act like the Khandesh District, because it is said that the factories in Guzerat do not work for more than four months.

As I have obtained sufficient experience as regards these factories in this district for 18 years, I have strong reasons to bring the fact to your knowledge that poor workmen are oppressed and overworked on cheap wages by keeping the factories working for long hours which if taken into calculation would came to more than 4 months and it is therefore advisable to take necessary measures to introduce the Factory Act for reasons given below :—

1. No factory has its responsible superintendent except a few ignorant and inexperienced persons and no attention has been paid to the sanitary conditions of poor hardworked workmen.
2. There are no fixed and regular hours for starting and closing the factories. The workmen have no rest nor ease to take their meals or drink water or go for necessary purposes because the factory is not stopped working even for 10 minutes during mid-day.
3. The factory owners start work at 4 or 5 o'clock in the morning (not even at day-break), without any interruption in the noon or evening, but keep on working till the late hours of one or two o'clock in the night.
4. There are no two gangs of workmen for such long hours or any relieving parties and they are not even paid double wages or overtime money. Night and day are considered as one whole day. When the factory closes in the evening they get half a day's wages (1 to 2 annas only)
5. We find on work night and day children 8 to 10 years old and on account of their age they are paid in halves
6. Without any rest in the interval, these old and young labourers get only 3 or 4 hours for sleep at night.
7. No holiday allowed once a week or the work stopped on Sundays, and the work continues during the full season for 100 to 125 days.
8. The workmen are chastised when found dozing and are kept awake.
9. If a workman declines to work owing to over exertion and fatigue he is not granted leave and if he absconds he loses the whole amount of his due wages. They are not paid monthly but their account is settled 4 or 5 months after season is over. They are paid some money only to meet their wants of food after tantalizing them.
10. The workmen are not provided with sheds or dwellings; they live in a corner of the factory yard by making some poor shelters with their own hands, and in the absence of closets they commit considerable nuisance in the open land in the neighbourhood and the place is surrounded with evil smell which defile the atmosphere. They get their supply of drinking water from filthy, oily and muddy factory tanks.
11. There is no medical aid during their illness; they are left to their own fate and kept lingering till death relieves them of their pains.
12. The factories are not constructed on sanitary principles or according to engineering plans and the result comes in killing workmen by being girdled round in a moving strapping or by damaging their limbs and some die suffocated in drains under the gins.
13. There is no Government record of deaths of workmen who die of over-exertion of such work of 20 and 21 hours of absence of medical aid and of disorderly construction of the factories.

Taking into consideration the longest hours of work as defined above the average calculation might come to 6 or 7 months shewing the busy time of the factories.

It becomes a question then, why people on this side come to such a work for 20 and 21 hours; because they are not skilful, active and happy workmen like Bombay's. They are ignorant, uneducated, idle and starving. Having suffered hardships and turned penniless during the famine they are attracted to ginning work and feel nominally contented on low wages of 2 or 3 annas and thus end their days of life in sufferings and miseries.

It is the chief look out of the Government to come to the aid and rescue of the ignorant mass from the clutches and oppression of the cruel and opulent factory proprietor, and enacting a Factory Act for the Surat and Broach districts

If the owners plead their defence by stating that their factories do not work more than 4 months, it would be better to modify the Act and reduce the period to 2 or 3 months because no man would be able to work continually for 20 hours for even a month, and it is therefore hoped that the Government will be gracious enough to bestow mercy upon poor people and put a Factory Act into

force at any early date into Surat and Broach Districts. The workmen in cotton presses also have no rest during the season except 4 or 5 hours during the night. The press machineries are kept working for 20 to 21 hours without interruption. Mr. S. C. Contractor

FALSAWADI, SURAT; 20th August 1906.

I have the honour to be,
Sir,
Your most obedient servant,
Sorabji Cooverji, Contractor,

Witness said that he had had 18 years' experience of ginning, as engineer, labour contractor, and proprietor There were three factories at Sayan. The hours were from 5 A.M. to 1 A.M.—20 hours, and some people worked the whole time. The hands recruited were *bhils* and coolies from the surrounding villages. There were three classes of pay:—the women who fed the gins received 3 annas a day, the men who removed the cotton seeds to the heaps in the compound received 4 annas a day, and the men who brought the cotton (*kapas*) from the compound to the mill platform received 5 annas a day. He obtained plenty of labour; children were also engaged. He considered that the working day should be limited to 12 hours, and with two shifts the females could work at night. In his district labour was plentiful The restriction of hours would make ginning rather expensive, but he considered that the quantity ginned in the same time would be greater. He had to buy cotton, then gin it, and sell it in the market. The profit on the ginning was not much, and it was more a question of speculation in regard to the cotton. Owners of cotton would not bring it to have it ginned, and so he had to buy and sell it himself. He could not restrict his hours owing to the competition of the other factories. He thought that the cotton in a good season could be easily ginned, before the burst of the monsoon, with a 12 hours' day, and two gangs of workmen. The health of the operatives was undoubtedly injured by the long hours They had head ache, fever, and consumption They could not afford to drink. In famine years labour could be obtained at 2 annas a day. He had had cases of accidents through children becoming entangled in the line shaft, and also a few cases of fire, but no deaths. He had no openers He received daily complaints about the long hours, but could come to no agreement with the other gins. The hands had an occasional festival as a holiday, but no weekly holiday, and all the people slept in the compound. It was only the healthy men who could work through the season The machinery ran the whole of the 20 hours, and if the hands wanted any time off they had to provide substitutes The engineer was generally paid a lump sum for the season of from Rs. 200 to Rs 300. The hands received money on account for their food, but they were not paid until the end of season, and if they left before, they forfeited their pay. A rough muster roll was kept. Occasionally very young children were sent to the gins, and sometimes they met with an accident. He approved of ginning factories being brought under the Act, but this was not the opinion of the other Surat and Broach ginning factory owners He had 30 gins, but no press The rates of pay had been the same ever since he entered the industry. At the end of the season the hands had about Rs. 10 to draw, the remainder having been advanced during the season. *Oral evidence.*

WITNESS NO. 70.

Mr. N. G. Powar, Honorary Secretary, Maratha Education Society, and Head Registrar and Accountant, Bombay Municipality.

The working hours of adult males should be limited, as the physique of workers has been affected by long hours. The maximum working day hours should be twelve, and except in mills working by shifts, the best way of enforcing this is, it is submitted, to prohibit work with the help of any artificial lights. It would therefore be advisable to prescribe— Mr. N. G. Powar. *Written evidence.*

(1) that the legal working hours should be from 6 A.M. to 6-30 P.M. except when working by shifts;

(2) that the engine should be stopped for half an hour between noon and 2 P.M.;

(3) that in factories working on the day shift system, the legal working hours should be from 5 A.M. to 8 P.M., provided that no adult male should work for more than 12 out of every 24 hours.

As the physique of workers between the ages of twelve and fourteen has deteriorated on account of their employment as adults, it is necessary to create a special class intermediate between the half-timer and the adult, whose working hours should not be more than nine. The employment of women at night should be prohibited. The minimum age at which children should be allowed to work in factories should be nine Certificates of both age and physical fitness should be required before children are allowed to work in factories. Similar certificates should be required before children are admitted in the special class, and before workers of this special class are admitted as adults It should be prescribed by law that children should not be employed except in double sets. Factory owners should be obliged to provide elementary education for children working in their factories. A rule should be made prohibiting non working young children from accompanying workers to dangerous or unhealthy parts of factories. It is desirable to prescribe an analytical standard of purity for air in factories. It is similarly of advantage to prescribe a standard of moisture for the air. A standard of purity should be fixed for the water used for humidifying purposes. The standard of latrine accommodation should be fixed at one seat for every 25 workers, and it is desirable to provide separate urinal accommodation. In case of fire, it is quite necessary to prescribe that all doors of working rooms should be hung so as to open readily from the inside outwards. To avoid injuries to workers, better precautions for fencing machinery are necessary. For securing the due observance of the Act it is necessary to appoint full-time medical inspectors of factories.

Mr. N. G. Powar. *Oral evidence.*

Witness stated that he had a good deal to do with mill operatives, educationally and socially, and was of their caste, a *maratha*. In his opinion the mill-hands had deteriorated in physique, and it was on account of the ill effects which the long hours had on their health that he wished for a restriction of the working day. A shorter working day did not necessarily mean less pay at the end of the month, because when they worked long hours they had to absent themselves on 2 or 3 days a month in addition to the weekly holiday. With shorter hours they would apply themselves more steadily to their work, and hence would earn practically the same money. He believed that the absentees were fewer in those mills that worked short hours. The statement that the mill-hands went to those mills which worked long hours could not have been obtained from an operative. He did not admit that operatives preferred working in those mills which ran for long hours. The operatives complained of injury to their eyes by reason of the electric light, but they did not object to work by it. They were also willing to work a longer day at the hottest time of the year If artificial light were prohibited there would be fewer working hours in the cold weather, and he thought that the operatives would be content with less pay The workers were generally agreed upon an average 12-hour day. The majority of Bombay hands were on piece work, and they favoured the restriction of working hours. Witness could not give off-hand the name of a mill where short hours were worked, and where there were no absentees. The operatives usually went home once a year, and this recruited their health. No mill hand in Bombay possessed a house in the city. Many owned houses in their own country, to which they retired when mill labour became too arduous by reason of advancing age, and they then became dependent upon their families. The mill-hand, by reason of his work, aged very rapidly, and spent his latter days in his own country. That accounted for the apparent low mortality among mill operatives as shown in Bombay, but if statistics were obtained from Ratnagiri witness averred that the death-rate would be very high for that district. Witness had not the death-rate of the Konkan population, and had no statistics available to support his opinion as to the high death-rate among retired mill operatives in their own districts He did not consider that there was excessive drinking among operatives Perhaps 20 *per cent.* might be termed moderate drinkers. In his opinion the mill-hands did not retire to live on their savings. He could not say whether there was a large number of people living in Bombay who relied for their livelihood solely on mill employment. Personally no one had ever asked him to use his influence to obtain for him mill employment The system of illegally demanding payment before obtaining work for a man—*dastur*—was prevalent in Bombay. There was a great demand for all forms of labour in Bombay, and in his opinion certain classes preferred mill work. The attendance at the mill schools should be made compulsory, and parents would welcome the educational facilities offered to their children. He would compel mill-owners to provide schools, and would make other employers do so also

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Witness No. 71.

Rao Sahib Dr. V. P. Chavan, L. M & S.

Dr. Chavan. *Written evidence.*

There is no question that the long hours of work carried on in factories, day after day, shatter the constitution of mill-operatives. It is necessary, therefore, that the hours of work should be limited, even supposing that the mill-hand requires many short stoppages to do his work. A fixed eleven hour-day with an hour's recess besides is as much as can be reasonably expected from the mill-operatives of Bombay. The opening time should not be earlier than 7 a. m. (S. T.). The engine should be stopped a full hour any time between twelve and two. Subject to the eleven hour-day, factories working on the shift system should be allowed to work from 5 A. M. to 8 P. M The creation of a class of "young persons" between 12 and 14 is not advisable. The definition of a child should embrace all children under 14. To make a child between 12 and 14 work full time is to lessen considerably his chances of attaining full growth, especially when we remember his want of stamina The keeping of a special register of all workers under the age of 16 will certainly help to find out how far they are able to work full time. Women should not be allowed to work at night. Considering the nature of the work and the conditions under which it is performed, the minimum age at which children are allowed to work should be raised to 10 Age certificates in the case of children have not been found so far to be a success. Certificates of physical fitness giving full identification marks are absolutely necessary I think that the physical examination suggested for the children before they are allowed to do a full day's work, also the age certificate, are necessary. It is necessary in the interests of children that they should be made to work in regular sets These should be divided into morning and afternoon sets And in order that the law may not be evaded the boys from any one set should not be allowed to work in another set. Certainly it will pay the mill-owners, in the long run, if they open schools for children working in their own factories Compulsion in this matter, however, will not be productive of much good. Non-working young children should be stopped from going to dangerous or unhealthy parts of factories This can be done by providing separate accommodation for them within the factory walls, under the supervision of a matron or *ayah* It will be an attempt in the right direction to introduce hygienic conditions by prescribing a standard of purity for air in factories. I am not in a position to say what standard of moisture should be prescribed for manufacturing processes, but one thing is certain the less the moisture the better chances the employes will have against lung diseases. In cities like Bombay I do not see why pure water should not be insisted on. But in up-country stations I do not know how far it might be practicable to do so I believe the present standard of latrine accommodation—one seat for every 50 workers—will be found sufficient But there must be separate urinal accommodation for female and for male workers It is necessary that all the doors should be made to open readily from inside outwards, and that there should be a sufficient number of them. Non-uniformity in the administration of the Factory Act is sure to raise a host of protests. But there should be some sort of elasticity regarding the administration of the law under different Local Governments. There should be full-time medical inspectors in addition to the present inspectors to see that the rules are not broken. I am in more or less touch with the Bombay mill hands that

come from the Ratnagiri District. I have not got any statistics regarding the relative healthiness of these people. My opinions are based on my observations. The mill-population of Bombay shows a decided falling off in point of health as compared with the average of the non-factory population of the same class. The most common diseases the mill operatives suffer from are those of the pulmonary and the digestive types with consequent loss of weight, anæmia, &c. Another consequence of their working in a vitiated atmosphere is that they have less resisting power. One thing I have marked is that they do manage to prolong their lives by running down to their villages and it is only then that they are able to throw off even ordinary ailments. The dentition test by itself cannot be relied on in finding out the ages of children. It is an easy matter, comparatively speaking, to ascertain with some accuracy the ages of children of and above the age of 14. But to do so accurately in the case of young children below 12 is very difficult. More stress ought to be laid on the general development, weight as compared with height, etc. These ought to be the predominant factors in deciding the suitability of the candidates. Freedom from organic disease ought to be insisted on. A strict medical examination at the beginning will cause less friction later on, when the full-time certificate is to be given. Looking to the amount of work they will be called upon to do, it is very necessary that full-time medical inspectors should be appointed. Their services can be utilised not only in supervision work, but in gathering statistics under various headings, the want of which has been so acutely felt. The higher grade officers should be recruited from the I. M. S. on the same lines as those of the Imperial Customs, with liability to service throughout India. In fact, a separate department will have to be created. The advantages are many. These trained officers will be experts, and the Government will be in a position to get accurate inside information. As the officers are to be selected from the I. M. S. the pay must be proportionately arranged. In fixing the pay, regard must be had to the fact that they will be losers as regards private practice, which should not be allowed under any circumstances whatsoever. Once they elect to join the Factory Department, they should continue in it till they retire. They should have able assistants—university graduates with special knowledge of hygiene who should be required to pass a departmental examination before they are confirmed. These assistants should also be barred from private practice. The mill-owners are under the delusion that their prosperity is not at all bound up with that of their operatives. As they (the mill-owners) get a percentage for management on the output, it is to their interest that as much work as can be squeezed out should be got from the wretched workers. The owners never dream that exhausting labour does not pay in the end. With a little foresight and thought the lot of the mill-hands can be improved easily. I may be allowed to give one instance out of many. The mill-operatives have to give exorbitant prices, and receive inferior quality in respect of the necessaries of life. If grain shops are established on the co-operative system, not only would the workers have articles superior in quality, but also cheaper in price.

Dr. Chavan.

Witness stated that he came from the Ratnagiri District, and had had a private practice in Bombay for 14 years. He had a dispensary in the mill quarter, and had studied that class of operative. It was his opinion that, as a class, they were deteriorating; and the effect of their work was such that their power to resist disease was diminished. If an operative suffered from a common ailment, he required a longer course of treatment before recovery than a person in some other employment would need. Their complaints were chiefly pulmonary and digestive. The latter was due to the fact that they could not take their meals properly, and had to bolt their food. The mortality returns would naturally be found to be less in Bombay, for directly they become ill they proceeded to their villages, where they had a better chance of recovery. When they became elderly, they also went to their country, and this fact explained the absence of old men in the mills.

Oral evidence.

Witness then read the following note:—

"The most important point in the causation of any disease is the impairment of vitality, *i. e.*, of resisting power.

The Mills.—Taking the average of 14 hours as the time spent in the mills, the ventilation of the mills is an important factor in the well-being of the operatives. We know physical labour calls for constant supply of pure air. The air in the mills gets charged with impurities, fluff, the products of combustion of coal, &c., and also by the organic matter given off by the lungs of a large number of operatives. The various trade processes vitiate the air further, and when this mixture is breathed habitually it produces a state of anæmia, and a general impairment of health.

The Residence.—When these mill-hands return from their work, they are in too exhausted a condition to do anything. They take their chief meal of the day at the time, but they do it mechanically. Being in indigent circumstances, there is little in their coarse meals to tempt the appetite. Rents have gone up, especially in these overcrowded localities, and the consequence is that each room is occupied by two families instead of one, as before. In these overcrowded places they pass the remaining 10 hours of the day, inhaling foul carbonic-acid laden air. In the morning they are obliged to get up at 4, or even earlier, if they stay at some distance from their work.

The Bombay climate is the worst climate for lung diseases, on account of the high level of the subsoil water producing dampness. It is no wonder then that the vitality of the mill-hands is too low to withstand the attacks of any disease. They do not get throughout the 24 hours any good air. They have neither nourishing food, nor have they the strength to digest it. Thus we see that there is starvation in respect of nourishing food—it being defective in fats, etc., which are indispensably necessary for physical labour. The same starvation occurs as regards fresh air. Anything that affects prejudicially these two essential things, either in quantity or quality, produces wasting diseases, such as anæmia, consumption, etc."

Witness, continuing his evidence, stated that some of the mischief was caused by having to stand for so many hours at their work. The residences of the mill-operatives were better ventilated than the mills. Mill-operatives did not buy better food than other classes of labourers, for although they might obtain more money, yet they were heavily indebted. In his opinion a portion of the wages earned in the mill went to pay off the interest on the family debt. They were always in debt in Bombay to the grain-dealer and *marwari*; because while their expenses of living started forthwith they did not receive any pay until the end of the second month.

Dr. Chavan.

Under the Bombay system of payment the mill-hand did not receive all the money he had earned. The *marwari* by bribing the jobber was admitted to the paying-room, and so possessed himself of part of the wages. Owing to the rise in the prices of foodstuffs in Bombay, a fact which had been recognised by many large employers of labour, he did not consider that mill-hands were well paid. An adult had to pay Rs. 6 a month, and child of 16 from Rs. 4-8-0 to Rs. 5 a month, for their food at a dining-house. The mill-child's pay only just sufficed to pay for his food. Witness had had no experience of inside-factory life, but operatives spoke to him about the conditions under which they lived in the mills. Operatives generally went home once a year, if their financial position permitted. They would have no savings, and their relations would feed them. Their evening meal occupied about 10 minutes. A family, consisting of the father, mother, and two children, might earn about Rs. 40, out of which they ought to save Rs. 15. They had, however, to pay their debts. Many mill people sent money home, and this was in the nature of a saving. The ordinary coolis earned 8 annas a day, arranged for his food, and slept on the pathway at night. The mill worker with a wife was put to the expense of sharing a room. He had not a large attendance of mill patients: the number of new patients being about 2 or 3 a day. His dispensaries were in Girgaum Back Road and Kamatipura.

Witness No. 72.

Mr. D. P. Settna, Bombay.

Mr. D. P. Settna. *Written evidence.*

I represent the Maneckjee Petit Mill of the Maneckjee Petit Manufacturing Company, Limited, Bombay. There are 3,132 men, 720 women and 190 children working in the mill. A statement showing the hours worked in the last 10 years is annexed:—

Years.	Number of days *over* 12½ hours *per* day.	Number of days *under* 12½ hours per day.	Total working days.	Average number of working hours *per* day.
				H. m.
1897	129	181	310	12 6
1898	131	179	310	12 14
1899	131	166	297	12 11
1900†				
1901	129	180	309	12 4
1902	130	179	309	12 11
1903	132	179	311	12 9
1904	131	180	311	12 11
1905	132	179	311	12 10
1906	130	181	311	12 6

In the last two months of this year the mill was worked short time owing to the depressed condition of trade.

† Particulars are not given, as owing to the depressed condition of trade in this year the mill was worked short time for several months.

It is necessary to limit the working hours of adult males. Long working hours affect the physique of workers. I would say that the working hours should not exceed 13 hours *per* day, inclusive of half an hour's rest at midday. The legal working hours should be from 6 A. M. to 7 P. M. (Bombay time) and the engine should be stopped for half an hour between noon and 2 P. M. The institution of a separate class of "young persons" would create difficulties of administration without any practical good. The stamina of some of the mills-hand is naturally low, and it would be a hardship if strict regulations for physical fitness were enforced. The employment of women in the mill at night should be prohibited. The minimum age at which children are allowed to work in factories need not be raised beyond nine. Certificates of age may be required as at present, but any strict regulations as regards physical fitness will not be to their interest. Many of them are naturally of weak stamina, and their prohibition from employment would be a hardship, as during the absence of their parents at work there will be nobody at their home to look after them and they will while away their time in idleness and also in the company of undesirable persons. It is necessary to prescribe by law that children shall not be employed except in sets, and that elementary education should be provided for them at the expense of the mill. Non-working young children are hardly ever seen accompanying workers to dangerous or unhealthy parts of factories. Samples of air from factories may be tested to fix a standard of purity. It is difficult to prescribe a fixed standard of moisture, as the circumstances of different districts and localities vary a great deal. Water used for humidifying purposes should be pure. The present standard of latrine accommodation is quite adequate and need not be raised. Separate urinal accommodation should be insisted upon. It should be prescribed that all doors should open from the inside outwards wherever convenient. Uniformity in the administration of the Factory Act throughout India is desirable. Full-time medical inspectors of factories are not necessary.

Mr. D. P. Setna.

It is most essential to prescribe some time limit within which children may be allowed to work pending their examination for a certificate. Mills which have a regular dispensary of their own generally engage the services of a qualified medical man. This medical gentleman also examines all the children submitted to him before employment, and certifies their age in a book kept for the purpose. Such mills may be granted three weeks' time within which they should get the children properly certified by the official certifying surgeon. In other cases a week's time would be quite ample. If the recommendation that no half-timer should be permitted to work as an adult unless medically certified as physically fit be accepted, there would be a great many hitches in its application, and it would be impossible to completely stop the non-certified half-timers of a mill from working as adults in other mills unless the half-timers are made legally responsible. I am not in favour of the creation of a class of young persons. The creation of such a class, with the restriction of their hours of employment under 12½ working hours a day, will practically determine the working hours of the mill. The majority of the hands employed in the spinning department, and a good number of other workmen are between 14 and 16 years of age. The imposition of definite time limits beyond which no mill could be legally worked is preferable to other methods of enforcing a limitation of hours, as then it would facilitate the work of the factory inspectors in watching the administration of the Act. It is not essentially necessary to obtain all the factory inspectors from the United Kingdom. It is advisable to have a few of the inspectors from overlookers who have worked for a long time in local mills, and who have got experience of the habits of the workmen. Such inspectors will be in my opinion better able to detect the sharp practices of the mill *muccadums* and others in evading the due observance of the Act. Any law that may be eventually decided upon should not be of a very stringent or harassing nature. When introducing legislation for physical fitness, due consideration should be paid to the general stamina of the workmen. I append a statement showing the effect of working days of varying length on production :—

Years.	No. 20s average *per* spindle *per* hour of working days *over* 12½ hours *per* day.	No. 20s average *per* spindle *per* hour of working days *under* 12½ hours *per* day.
	Oz.	Oz.
1897	0·56	0·57
1898	0 57	0·59
1899	0 57	0 61
1900	Particulars are not given as owing to the depressed condition of trade in this year, the mill was worked short time for several months.	
1901	0·61	0·64
1902	0·61	0 62
1903	0 58	0 61
1904	0 57	0·58
1905	0·58	0·59
1906	0·57	0·60

NOTE.—As all the records of this mill are based on yarn of No. 20s standard, these statistics are prepared accordingly.

Statistics of waste are not included in this statement, as in my opinion they will not be a proper guide to the Commission. Quantity of waste turned out in a mill chiefly depends on the quality and class of cotton used and the counts produced therefrom. These statistics will show to the Commission that the outturn in longer days being more than in shorter days, the working of the mill for longer hours will be more economical than for shorter hours, as all the standing expenditure such as insurance and interest charges, municipal taxes, ground and godown rents, establishment charges and salaries of workmen and others on fixed wages will be the same per day if the mill worked long or short hours. However, I am of opinion that unusually long hours will not be proportionately so economical as the working of a mill from sunrise to sunset.

Oral evidence.

Witness stated that there was electric light in his mill, but it was used only for illuminating the dark places, and the mill engines did not run after sunset. He did not work the long hours of 1905, and his mill was only handicapped thereby in one respect, namely, that a few of the hands preferred to go to those mills which worked longer hours in order to obtain more wages. Since then the opinion of the operatives had changed, and they did not prefer long hours. There was a scarcity of labour at present owing to the large demand. He wanted the hours restricted in order to protect the operatives. In his opinion the production *per* hour was very much the same in the long as in the short days. A fixed 82 hours' day would mean the general introduction of electric light. The operatives would not object to their working day being interfered with, if the hours were fixed by legislation. He did not anticipate an improvement in skill with shorter working days but they might apply themselves more. A want of unanimity among the mill-owners prevented the 13 hours' agreement from being carried into effect. The general opinion, he thought, was in favour of limited hours. Twelve and a half hours' working would not affect the industry so far as the China trade was concerned, but a 12 hours' day would mean less production and greater proportionate working expenses. The hands could work for 12½ hours without injury to their

Mr. D. P. Setna.

health. They wasted a good deal of time, and all efforts to make them apply themselves more had been unsuccessful. Comparing mill-operatives as a class with other labouring classes, he considered they were healthy. He had been for 30 years in the industry, and could detect no deterioration in their physique. The long hours affected their health at the time, and they had to go to their country to recuperate. Without those chances of recuperation the long hours would have permanently affected their health. The hands in his mill also took occasional holidays. He considered that the mill-hand retired to his country between 45 and 47 years of age to live on his plot of land, and to be maintained partly by his children. They did not lay by money for their old age, and 20 *per cent.* of their pay was spent in drink. Ninety out of one hundred hands visited the liquor shops nightly and spent quite 1½ annas each *per* day. On holidays some of them drank till intoxicated. He considered that the drink habit was increasing owing to the increase in the number of grog shops, and the greater facilities for obtaining liquor. If some of them saved money, it was through the small remittances which they sent to their native country. It was a common occurrence for them to go to a different locality when heavily in debt, but he did not think they ran into debt on purpose. The grain seller and *marwari* charged from 50 to 70 *per cent.* and were to be seen outside the mill gates on pay day. Some of the children in his school could read and write; he thought it would be better to have the school inside the mill compound. He considered that 7 hours all at once was too heavy a strain on the half-timers, and in the long days the No. 1 shift would have to work on till the engine stopped at noon, which would be over the prescribed time. In his mill they worked for 3 hours and then went to school, where efforts were made to teach them. If the children worked their day in one shift and then went home, he did not think that five out of one hundred would attend school unless made to. He would like the names of the boys in the different sets kept in a register, so that they could not be illegally employed, and if a boy in A set was found on the premises when B set was at work, he would make that an offence. He considered the present arrangement in regard to women quite good, and if their hours were made to correspond with those for the men, he did not see how they could be employed more largely to any appreciable extent. Their domestic duties would always stand in the way. Before the present Factory Act, women worked in the carding room, but he had never seen any working on looms, and a large number could not work on the spinning frames. At present the certifying surgeon was paid Rs. 30 for three visits to the mill *per* month. He considered that a lad of 14 was sharp enough to do the work now demanded from him and that he earned the wages paid him. The youth of 14 did not earn too much. Any regulations as to age and physique should be based on the stamina of the class as a whole. Owing to differences of opinion among the certifying surgeons, a boy of nine might be rejected at one mill and accepted at another. If they could have a general standard, it would be a good arrangement, but one full-time medical man would not be sufficient. He objected to having to send the boys to an outside office for examination owing to the length of time they were kept away. He suggested a 13 hours' working day as a compromise, and should not work longer himself. If the working day were fixed at 12 hours, then owners would work up to the maximum in the short days. On account of the age difficulty he disapproved of the proposed "young persons" class, but if it were proposed to allow these "young persons" to work for 83 hours, then he had no objection to the creation of the class. By the words "sharp practies of the *muccadums*" in his written evidence he meant the warning they gave by whistling in a peculiar way when the inspector appeared, so that overtime children could be got out of the way. This was only done in rare cases. He wanted the 13 hours' restriction because it was possible that the long hours might occur again.

Witness No. 73.

Mr. M. M. Fakira, Bombay.

Mr. M. Fakira. *Written evidence.*

I am the superintendent of the Currimbhoy, the Ibrahimbhoy Pabaney, the Crescent, and the Fazulbhoy Mills. The number of hands employed in each of the above mills, and the other particulars asked for in the questions for factory owners, agents and managers, are given by Mr. Fazulbhoy Currimbhoy in his statement. There should be no restriction on the working hours of adult males. They always look at their physique, and long hours never affect them, but if hours of labour be curtailed they will spend their time at toddy and liquor shops, which will be more harmful to their health than working inside the mills. To creat a special class of "young persons" will only create disturbance both to the mill and to this class. Also it will be very hard for every mill to obtain a sufficient number of hands to keep the work going. Besides, at this age the constitution of Indian boys is sturdy, and they are as good as adults for any work. Also the major portion of the Indian working class get married at this age, so they must work "full time" for their maintenance. The hours of work for women under the present Factory Act are quite reasonable. The minimum age for children should not be raised, as there is no hard work for children, except doffing occasionally at certain intervals when the doffs are full. An Indian boy at the age of nine is half a man in every respect. Certificates of age and physical fitness will to a certain extent do good. These certificates should be granted only once, that is, at the start when a boy intends to join mill work, and not thereafter, that is, if he goes from one mill to the other. The present Factory Act system is quite unobjectionable as regards a boy from half time going to full time at the age of fourteen. No restriction as to this is necessary. To keep separate sets of children is necessary, and this is the system at present: of course binding by law is better. Education should be given at the expense of the Municipality. Meals of a good many operatives are brought by non-working children, but they never endanger themselves. A special space should be reserved in each mill where non-working children may be allowed to come with the meals. Comparatively, operatives enjoy better fresh air in the mill than where they live in houses. They experience damp and filth in their lodgings. Storeyed buildings need no more ventilation, but flat buildings and the ground floors of storeyed buildings would be better if provided with a pair of propellors in each room. The extra fresh air will prevent workmen from becoming fatigued, specially in the hot season. One standard of moisture throughout India will never do. It must vary according to the varieties of cotton, and also it greatly depends on sizing ingredients and the percentage of size on the yarn. If fresh water be used for humidi-

fying purposes it will do much good, also it won't be costly as the percentage of evaporation is very much less. The present latrine accommodation is sufficient. The present sliding fire-proof doors give satisfaction, and sufficient outside doors are always kept open during working hours. The present precautions for fencing machinery are even more than is necessary. It is desirable that arrangements be made to secure uniformity in the adminstration of the Factory Act throughout *the whole* of India. It is advisable to appoint medical inspectors of factories to assist the present inspectors in securing the due observance of the Act. Mr. M. M. Fakir.

Witness gave it as his opinion that mill-hands could work up to 14 hours a day, and that that number of hours in the mill only meant about 12 hours' actual work. The production *per* hour in the long days was as good as in the short days, and perhaps a shade better owing to the men paying more attention to their work when working by electric light. He considered that the spinning was better at night, and that there was less waste. A boy of nine could do half a day's work, but he did not employ half-timers. He had found that the doctor exercised his own discretion when passing children as over 14. He had no objection to a standard of purity of air, but it was impossible to enforce one for India with its varying climatic conditions. A child only worked for about two hours out of the seven. The restriction of hours from 13 to 12 would mean an increased cost of production. Masters could not now control the men, who dictated their own terms. The "young persons" class would determine the working hours of the mill. Very often a youth was married at the age of 15 or 16, and would object to be classified as a "young person." *Oral evidence.*

WITNESS No. 74.

Mr. Jamsedji A. Wadia, Bombay.

I am a director of the following companies :—

The David Mills, the Standard Mills, the Currimbhoy Mills, the Ibrahimbhoy Pabaney Mills, the Crescent Mills, and the Fazulbhoy Mills.

For the last few years most of the above mills have been working about 13 hours with electric light. Adult male labour in my opinion should not be restricted. I do not think 13 hours' work has caused any physical deterioration. If hours are fixed then I recommend 12½ working hours, which could only be enforced by legislation. I am in favour of adhering to the present hours for starting and stoppage of engines. In my opinion there is no appeciable employment as adults of those who are under 14 years of age. I do not recommend the creation of a class of "young persons". A register may be kept to facilitate inquiries for those under 14. I do not recommend any increase in the age of children. Certificates of both age and physical fitness of children should be required before employment, but no certificate should be demanded on or after the age of 14. Children should work in two sets, one in the morning and one in the afternoon. I am not in favour of making it obligatory to provide schools for factory children. As a rule non-working children do not enter mills to any extent worth mentioning. As to ventilation and sanitation, all modern mills have plenty of light and air, but if any legislation is deemed desirable, it should be undertaken in conjunction with scientific experts and practical mill managers. Full-time medical inspectors should in my opinion be appointed. Shorter hours mean smaller production, and longer hours mean greater production. With Indian workmen who are illiterate it is impossible to expect them to turn out better work if shorter hours are made compulsory. During a recent agitation we were compelled to discontinue electric light for about two months, and we found that production fell in proportion. No better work is to be expected in the near future from a workman unless free elementary education is given throughout the country, thus raising the standard of intelligence of the workmen. In spite of all the supposed disadvantages of working in a factory, it has been found from municipal records that mill-hands do not fall victims to plague so readily as out-door labourers. It has been shown that labourers working outside factories have a death-rate from plague of 60 *per* thousand whilst the rate for mill-hands is given at 9. In conclusion, I am averse on principle to interfering with adult labour by legislation. Since India is not a self-governing country such legislation may be undertaken through outside influence, owing to clash of interests. But if legislation is resorted to, and a 12½ hours' working day be fixed all throughout India for all factories where steam is used, I do not think that the interest of the employers, and the employed will suffer. Mr. J. A. Wadia. *Written evidence.*

Witness stated that he had been connected with the industry as a Director of Companies for 20 years, and during that time he had visited the mills and become acquainted with the practical side of the business. In his opinion the mill operatives were a healthy class, and municipal records showed that they were not so liable to plague as other labourers. The figures in question were prepared by Mr. Wacha and submitted to a meeting of the Bombay Millowners' Association. They had never been contradicted. No explanation had been given why mill-hands should be immune from plague, but witness thought it was owing to their regular work and wages, and to their getting better food than labourers in outside employments. He had not observed any deterioration in the physique of mill operatives. Witness stated that he had prepared a table showing the number of absentees in the course of a month. Out of 1,726 hands in the Crescent Mill in December 1906, there were present for the full month 618. There were absent for one day 263; for two days 286; for three days 163: for four days 102; for five days 39 and for more than five days 255. That was an ordinary month, and was selected for the Factory Labour Committee, who were then in Bombay. The Crescent Mill was a weaving mill, and only employed about 200 females. Witness also submitted the following statements showing the average production of yarn in short as compared with long working days :— *Oral evidence.*

The Ibrahimbhoy Pabaney Mills—

No. of hours *per* day.	Production in lbs. *per* day.	Average *per* spindle.
13 hours 54 minutes	30,716	·798
12 hours	26,502	·802

Mr. J. A. Wadia.

The Currimbhoy mill—		
13 hours 47 minutes	22,891	·705
12 hours	19,356	·698

The figures for the short working day are based on the three months' production of October to December 1905, and those for the long working day on the month or two previous to October 1905.

Witness had also had a census taken of the number of hands in the compound at different times of the day. At the Currimbhoy Mills the average number of hands present was 2,341. There were in the compound at 8 A.M. 135; at 11 A.M. 125; at 3 P.M. 130, and at 5 P.M. 135. At the E. Pabaney Mills the average number of hands present was 1,593. There were in the compound at 8 A.M. 130; at 11 A.M. 140; at 3 P.M. 165, and at 5 A.M. 151. At the Crescent Mill the average number of hands present was 1,799. There were in the compound at 8 A.M. 100; at 11 A.M. 120; at 3 P.M. 130, and at 5 P.M. 115. The longest time worked was practically 13 hours 54 minutes, excluding the interval, and these hours existed for some time after the electric light was introduced. At present his mills worked for 13 hours, and he considered that the correct number of hours for a working day. He was opposed to any restriction of the hours of adult labour, and thought that the men and employers could arrange the hours between themselves. The operatives even now dictated the number of hours to be worked. In October 1905 the men objected to work any longer by electric light, and so the 12 hours' day was tried. The operatives then found that their wages were falling, and so said they would work a little longer to earn more money. The men would have been content with the shorter hours at the higher scale of wages. Now the 13 hours' day had been decided upon, and the industry was going along quietly. The day was not too long for the men, who were irregular in their attendance, and could absent themselves at will. In his opinion they would absent themselves whether the day was short or long: it was their habit to do so. Witness estimated that the operatives only worked 11 out of the 13 hours, and out of that 11 the men took time for their meals, and also idled about inside the building. He did not anticipate any improvement in their habits even in the course of 20 years, unless there was free primary education which would effect an improvement in their intellect. He had not noticed any improvement in the skill of the operatives. Such improvement as there had been in production was the result of improved machinery. The strike against electric light would have become general if the mills concerned had not given in. There was no agreement among the mill-owners, but he did not anticipate any further increase in the hours of work. For instance, the spinning trade at present was bad, and the weaving trade extremely good, and yet owners had not gone beyond the 13 hours. Both masters and men had settled down to the 13 hours' day and it was his opinion, that if the owners attempted to increase those hours, there would be a disturbance with the men. Witness worked these hours in his mills all the year round, and other mills were installing the electric light as fast as possible in order to work a uniform 13 hours' day. With the half hour interval in the mill, and allowing one hour for coming and returning from work, there only remained nine and a half hours for the operative at home. In witness' opinion the men seemed to like it, because they did not object. They came to Bombay to make as much money as possible in a short time, and then return to their villages. He got all the labour that was required, but to obtain sufficient for relays was impossible Taking the operatives as a class they undoubtedly saved money, which was proved by their sending so much through the Post Office to their families. The mill pay must be good, for although the labour market was very brisk, yet the mills were well supplied with hands. It was evident that the pay was sufficiently good to induce them to remain in the mills. The elderly people retired to their villages, and witness thought that only about 10 to 15 *per cent.* of the hands were in debt. This indebtedness was largly due to drunkenness, and every facility was given them for drinking. He understood there were 14 grog shops within a small area in the mill district at Parel. All the mills of his Company were modern buildings, and the windows provided plenty of ventilation. The operatives, however, preferred to keep the windows closed. Witness was of opinion that a 12 hours' day would not greatly interfere with the industry

Witness No. 75.

Mr. Rubins, manager of the Rehmani Mill, Bombay.

Mr. Rubins' *Written evidence.*

I am the manager of the Rehmani Spinning Mills, which employ 500 adult operatives and 200 females. I do not employ children now; I do so only when there is a scarcity of labour. The mill has only worked for 4 years. Statistics showing the production *per* spindle *per* hour are annexed. I do not think there is any necessity to obtain trained inspectors for factory work from the United Kingdom. We have sufficient managers and engineers, both Europeans and natives, here, who are well versed in the language, customs, etc. of the people, to make an efficient staff. I do not think the present working hours of adult males are excessive, or that their physique has been affected by long hours. They compare favourably with workpeople outside the mills, I am of opinion that the hours of adult mill labour should not be restricted, as there is no such restriction in other paths of life. They are practically masters of the situation, and are always able to suit themselves easily elsewhere if they are not satisfied with mill life. I consider half an hour recess between noon and 2 P.M., as quite sufficient for their philandering and sight-seeing round about the mills; they do nothing else then, but they take good care to have other recesses, on their own, when the length of time and numbers are unlimited. I do not think a class of young persons necessary under the existing Act, if a physical examination of children is held before they commence work as half-timers, and then another examination at 14 before they are passed out as adults. However, I am strongly of opinion that the physical examination of children should be as strict as possible before they are certified as fit to work. I came across a few instances of certified children who would have been better out of the mills. I think the minimum age of 9 suitable. I do not think any restriction should be placed on the over-time system. This is a matter that rests entirely with the operatives, and they will certainly resent any interference by which their earnings are lessened. I am of opinion that a compulsory stoppage of mills on Sundays, independent of Hindu or other holidays, will be greatly appreciated by the operatives in general, and will prevent any

one from infringing the Factory Act. This notion, if carried out in law, will act as a tonic to the operatives whose usual dissipation during their holidays makes them take a day off on their own responsibility, knowing as they do that they have a straight run of 10 or 12 days before them. This would mean a loss of wages of, say, 12 to 13 days in the whole year to the operatives, which is infinitesimal compared to the 12 hours a day proposal, which I do not for a moment support. As the result of my long experience, and my intimate knowledge of labour both in Calcutta and Bombay, I do not think the health of mill hands has deteriorated on account of the hours they work. With regard to the compulsory education of half-timers, I think it is a waste of energy. The class from which the mill operatives come receive no education, generally speaking, and there is no particular reason why mill-owners should be forced to provide education. The idea of giving education to children who were going to work all their lives in a mill is not tenable. I am of opinion that the Bombay mills are well ventilated, but it is doubtful if advantage is always taken of the appliances provided. Female labour should be entirely excluded at night in factories, and the present hours of female labour should not be interfered with. It seldom exceeds 9 hours. Mr. Rubins.

I think the present standard of latrine accommodation sufficient, but separate urinal accommodation could with advantage be provided. Regarding fire, I do not think there is any necessity to interfere with the present arrangement of doors; in case of fire the operatives vanish in a very short time by the numerous egresses provided for them, besides the fire escapes. I do not remember having heard of any fatality in a mill, due to this cause. Precautions for fencing machinery are ample at present. I am of opinion there is no need for full time medical inspectors to assist the present ones in Bombay. The observance of the Act is duly and efficiently seen to by the present inspectors. Any further harassing in this direction will make the mills suffer. But I believe that arrangements should be made to secure uniformity in the administration of the Factory Act throughout India.

Working day of	Production *per* spindle *per* hour of 10*s*.	Production of reeling yarn *per* spindle *per* hour of 20*s*.	Percentage of waste.	Period covered by these statistics.
	Ring and Mule.			
13 hours	·76	·37	18	From 1904 to 1907.
14 hours	·83	·41	18	

Oral evidence.

Witness stated that he had been connected with the industry for 20 years in Bombay and Calcutta. He did not consider that the present hours of work were too long. His mill worked from 5-30 A.M to 7-30 P.M., and it had run up to 8 o'clock, but that was the maximum for one shift. All the mills were working for those hours prior to the arrival of the Prince of Wales in November 1905, and then some stopped at 6 o'clock. The men found that their earnings suddenly became smaller, and so asked for the mills to be run for 13 hours. He considered 12 hours as the working day, and any time above that was overtime. For this extra time the men received 10 *per cent.* on their wages. Witness had a sufficient number of hands without employing children. The production *per* hour was the same in the long and short days, and there was no more waste in the long days. As a matter of fact he considered that the work at night was much better than the day work. He had worked his mill day and night with two shifts, and the night shift work was much better than the day shift work. This was largely on account of the humidity, but after midnight a little more supervision was required. The night shift originally worked from 7-30 P.M. to 2 A.M., but he found that the young adults could not stand the strain, and so he reduced the night shift time to 10 o'clock. The night shift workers received 75 *per cent.* of a whole day's pay. He had more men at night than in the day, and possibly some of them had worked elsewhere during the day. He worked the two shifts for nine months, and had to stop the system on account of a decline in trade, but he was prepared to introduce it again if trade became brisk. Of course, if more mills went in for night work, then there might be a difficulty about labour. For the night work he first paid daily wages, and then weekly wages Witness favoured the compulsory Sunday holiday, and thought that there were about 13 more days which would have to be given, thus reducing the working days in the year to 300. If the 12 hours' restriction was to be introduced, he would prefer to restrict the adult working hours. The treatment of the proposed class of "young persons" would affect the whole working of the mill, and their hours would determine the closing hours of the mill. A general restriction of adult hours would necessitate several exemptions, so perhaps the lesser evil would be the creation of this class of "young persons." After a holiday the men generally took another holiday, and Monday was a great day for absentees. A mill working by itself on a Sunday would also have a large number of absentees, but if all the mills were at work on a Sunday, then the number of absences would not be so great. In Calcutta the men would not work on Sundays. He was employed in the Serampur Mill, Calcutta, belonging to Messrs. Shaw Wallace and Company. The hands came from that side of India. In his opinion the Bombay men were much more skilful, and earned higher wages, perhaps 25 *per cent.* more than the Calcutta men. The labour problem was also a serious one at the Serampur Mill. They paid weekly at that mill in accordance with the jute mills custom. The cost of living in Bombay was much higher than it was in Calcuta, and owing to this rise in the price of foodstuffs in Bombay he understood that there was every probability of a big strike in a certain mill. The other Bombay mills would have to abide by the result, and if the men were successful, then the masters would have to give a further increase. In his opinion the men had a good organisation, and if their hours were reduced, they would not consent to a reduction of wages. Mill-hands were largely in debt, and the chief reason was the number of liquor shops which had

Mr. Rubins. been opened in the vicinity of the mills, Several of their social customs were also very expensive, and once they got into the hands of the *marwari* they never escaped. There were several who managed to save money and buy land, to which they retired when unfit for further mill work. He had at least 5 *per cent.* of his old workers still with him. In Calcutta water, coal, labour and cotton were cheaper, and wages lower than in Bombay, but for all that the mills in Bombay were worked more profitably. A large amount of cotton was grown around Calcutta, and he experimented with some at Serampur. They worked similarly long hours in the cotton mills in Calcutta, with the exception that they had two hours off at midday, or else commenced two hours later in the morning. The Calcutta hands were just as casual as the Bombay hands, and after re-starting the engine at midday the masters could never be sure of the men returning to work. Witness did not approve of a two hours' interval at midday. He was nearly two years at Serampur. Witness considered that the operatives had improved in skill. They had never complained to him of long hours. Recently his electric light installation was out of order for ten days, and the men came and asked that it should be attended to quickly, as otherwise they would lose money.

WITNESS No. 76.

Mr. H. E. E. Proctor, Bombay.

Mr. H. E. E. Proctor. *Written evidence.*

My firm, Messrs Killick, Nixon & Co., are the agents for—
The Kohinoor Mills Co., Ld., a cotton spinning mill;
The Bombay Steam Navigation Co., Ld.

The former employs	350 men.	
	600 women.	
	360 boys over fourteen.	
	1,300	
The latter employs in the workshop	200 men.	
	... women.	
	... boys.	
	200	

I cannot say how many days in each year our mill has worked over 12½ hours a day since it started in 1898, but I can say that we have no electric light, and have always run from daylight to dark. This means 11 hours in the shortest days and 13 hours in the longest, or an average of about 12 hours for the year. In my opinion, the working hours of adult males should be limited, and judging by the experience of the last few years, this can only be done effectually by legislation. As to whether the longer hours have already affected the physique of the workers, it is rather difficult to express an opinion now, seeing that the longer hours of work by electric light have only become general during the last few years. We should have to wait for the next generation to see the real result; but I am convinced that if the longer hours become general, there will be a marked deterioration in the physique of the workers. I consider that the extra 2 hours' work by electric light in the evening, when not only the atmosphere in the mill is at its worst, but the workers themselves are tired and their vitality exhausted, must exercise a bad effect, and probably takes more out of the operatives than the whole of the rest of the day. I consider that the working hours should be restricted to daylight, which would mean, as I have said above, an average of about 12 hours during the year, actually 12 hours 8 minutes. Next to this, the best system would be to fix them in the Bombay Presidency from 6 A.M. to 6-30 P.M. standard time. If this latter course was adopted it would mean that mills, in order to work these regular hours, would have to use electric light, and it is for this reason I advocate the former system as more suitable for mill operatives in a tropical country. If the hours are restricted as above, I am in favour of leaving the question of midday intervals to the mills to settle themselves, as I can see no advantage in fixing an arbitrary stoppage which might very easily be a cause of friction. I am much opposed to the shift system, as it could easily be abused, and the object aimed at by the restriction of hours would be defeated For example, two mills near each other might so arrange their shifts that the men from the one mill who had worked from 5 A. M. to 12 noon could work at the other from 1 to 8 P. M and *vice versa*, and it would be extremely difficult to stop this Provided the working hours for adults are restricted, I do not think it desirable to create a class of "young persons," but if they are not restricted, then I am in favour of creating such a class as it must result in physical deterioration to work a boy of 14 for more than 12 hours a day. Under our system of daylight working I do not consider these boys are overworked, as out of the 12 working hours they, as well as the men, spend nearly 3 hours in eating their food, smoking, washing, etc. If such a class is created I think the age should be from 14 to 17, and the hours limited to 12. The effect of creating such a class would, in most mills, be much the same as restricting the hours for adults, owing to the large number of boys employed. In the Kohinoor Mills we employ 600 women and about 350 full-timers or young persons out of a total of 1,300. I do not think it is advisable or necessary to raise the minimum age of children above 9. To do so would entail hardship on the parents by preventing the children from contributing to the support of the family. I think certificates of age and physical fitness should be required before children are allowed to work in factories, and that pending such certificates, they should be allowed to work for a fortnight. I do not think another such certificate should be required before children, who have worked as half-timers, are allowed to work full time as adults, provided they can produce their original certificate or satisfy the mill authorities by their records as to their age. Failing this I think a certificate of age alone should be required. I do not think factory owners should have to provide elementary education for the children employed by them. This should be provided by the Government or the Municipality. I am not in favour of any rule being passed to prevent non-working children from accompanying workers in the mills, as it would probably entail considerable hardship on the workers. During the

years our mill has worked there has been no accident to any of these children. I certainly think everything should be done to secure proper ventilation, and a proper standard of moisture, but these are matters for the opinions of experts. I do not think there is any necessity to increase the latrine accommodation, as the present arrangements appear to be quite sufficient. I am unable to say whether full-time medical inspectors are necessary, but I hardly think so. As far as I can ascertain, the present inspectors are very good and do their work very well. I can see no reason why our factory inspectors should not be trained in India. Should it be decided that full-time medical inspectors are necessary, then I think permanent men should be engaged either in England or India, and not appointed from the Indian Medical Service. My reason for saying this is that, if appointed from the Indian Medical Service, they would probably be transferred elsewhere just when they had got thoroughly into the work, and there would thus be a constant change of inspectors, which should certainly be avoided if possible. The opinions I have expressed above refer primarily to cotton mills. There are, however, many other factories and workshops which would be affected by the proposed legislation. In some of these, such as the repairing workshops in Bombay and elsewhere, night work is constantly an absolute necessity, and provision should be made for such cases. I am in favour of compulsory closing on Sundays in lieu of the present system of 4 days a month. My reasons are :— Mr. H. E. E. Prost

(1) on account of the Europeans employed in the factories who should not be required to work on Sundays; and

(2) because I think it would be better for the mill hands themselves to have their rest regularly every seventh day instead of the present irregular system.

Oral evidence.

Witness stated that this Company had had their mills since 1898. They had no electric light and did not work the long hours in 1905. From his experience of Bombay he was of opinion that without a direct restriction of the hours of adult labour the hours of work could never be restricted. He considered that the sunrise to sunset day was the most suitable to the Indian operative, and he would have no objection to the Local Government fixing the hours month by month. He admitted that the majority of mills had electric light, and if the sunrise to sunset day were enforced, their electric light installations would be of no use. In reply to a suggestion that he was opposed to long hours because his mill had not put up an electric installation, he pointed out that such an argument had already been urged by other mill-owners, but that it was really no argument at all, because in comparison with the large profits recently made, the cost of an electric light installation, which would be about Rs. 12,000, need not be considered. In the event of a fixed working day, the same all the year round, being made statutory, he would probably put in electric light at once. When other mills commenced working the long hours a few of their hands had left ; but, generally speaking, they have had no trouble with their hands, and there were many of them in the mill who had been there since the commencement. If adult labour was not restricted, then he was in favour of the "young persons" class being created, and the result would probably be the same. He suggested that "young persons" should be defined as persons between the ages of 14 and 17, and he did not think they would be over-worked by working daylight hours. From statistics taken in his own mill, he reckoned that out of the daylight hours the hands were actually absent from their work about 3 hours every day. He did not object to these intervals of rest because he thought that was the only way in which the operatives could work the hours they did With a 12-hour day he thought that stricter supervision could be exercised. He preferred adult labour, and his mill did not employ more half-timers than they could help. There was not sufficient labour available in Bombay to work the mills for two shifts, and the very long hours affected the labour supply because the operatives went away to their country more frequently than they used to do when the hours were shorter One effect of the long hours had been, by increasing the production, to glut the market sooner than would have been the case if shorter hours had been worked. Spread over a series of months, he did not think that there would be any appreciable difference in the production of a 12 hours' day as compared with the 14 or 15 hours day, and the Company did not think they had lost anything by working without electric light, as they obtained a better quality of work. Witness preferred the direct restriction of adult labour to the creation of the proposed class of young persons, as he did not think that such a class would work satisfactorily, and as he was of opinion that mill owners would get round it somehow or other. In reply to a question as to whether he was aware that legislation to restrict adult labour had not been brought into force in any other country and, whether, in these circumstances he thought it right to restrict adult labour in India, witness stated that in his opinion there was no reason why a new departure as regards factory legislation should not be applied to the conditions existing in India, as he thought the people were not capable as yet of knowing what was best for them. In reply to a further question as to whether, in view of the competition of other countries for the yarn market it would be fair to impose restrictions in India which might militate against cheap production, witness stated that his reason for advocating the shorter hours was because he thought the long hours were very bad for the present operatives, and also for future generations. The question as to whether their interests should be sacrificed for the benefits of the mill-owners was one for Government to decide. The operatives might not know that the long day's work was gradually injuring their health and physique, but witness thought that it was In his opinion, the 12 hours' day would have no bad effects on the industry. He had no objection to children being certified before employment. If Sunday were made a compulsory holiday, he admitted that this would theoretically increase the number of holidays in the year by about 12 days, and in that way would affect production, but he doubted whether it would in actual practice. He thought the workers would like a definite weekly holiday, and probably give up some of the extra days they now took. From statistics taken in his own mill, witness stated that the operatives generally, in addition to the 4 compulsory holidays, stayed away two other days each month. He was in favour of a compulsory Sunday holiday ; and personally would take the risk of the extra days being taken as holidays, and of a correspondingly reduced production, but he was unable to say, on behalf of his Hindu and other shareholders, whether they would approve of that course. After working for 9 months the operatives generally took 3 months' holiday. He had no objection to grouping the women with young persons, and allowing them to work for 12 hours.

WITNESS No. 77.

Mr. E. C. Madan, manager of the Hongkong Spinning and Manufacturing Company, Limited, Bombay.

Mr. E. C. Madan. *Written evidence.*

There are on an average about a thousand workers attending this mill every day of whom 800 are men and 200 women. There are no half-timers. The following figures show the number of days in the last 10 years during which our factory worked over 12½ hours *per* day:—

In ...	*1897.*	*1898.*	*1899.*	*1900.*	*1901.*	*1902.*	*1903.*	*1904.*	*1905.*	*1906.*
Days.	62	65	75	67	90	84	85	71	100	85

Average daily number of hours worked during the last 10 years:—

In	*1897.*	*1898.*	*1899.*	*1900.*	*1901.*	*1902.*	*1903.*	*1904.*	*1905.*	*1906.*
	H.M.	H.M.	H.M.	H.M.	H.M.	H.M.	H.M.	H.M.	H.M.	H.M.
	11-58	11-50	12-6	12-10	12-15	12-5	11-55	11-51	12-8	11-56

I think the working hours of adult males should not be limited nor should there be any restriction by law on mill-owners with respect to working hours. The physique of workers is not affected by long hours; they are allowed to go out for smoking and other purposes whenever they please. I do not think it desirable that a special class of workers intermediate between the half-timer and the adult should be created; the present system is quite satisfactory. Women should not be allowed to be employed at night. The minimum age of children should not be raised beyond nine, otherwise they would wander from street to street, having nothing to do, and turn out bad characters. Air in the inside of a factory, where pulleys and machines are working fast, is not bad in comparison with the rooms of some of the workmen, who live together in large numbers in *chawls* to their great discomfort. On account of the lofty rooms, and the large number of windows and doors, together with the continual rotation of the machinery, there is generally proper ventilation and little risk of impure air inside a factory. The latrine accommodation should be left as it is, and there is no necessity for insisting upon separate urinal accommodation. I do not see any necessity for the appointment of full-time medical inspectors of factories. Certificates of physical fitness as well as of age are necessary, but at least two weeks' time should be allowed for the employment of children pending examination for a certificate. The present arrangement of medical examination is all that can be desired. I am not in favour of the suggestion for the creation of a class of "young persons" as in the United Kingdom. This class of persons is generally employed in all mills in the carding and spinning departments, and the creation of the class of "young persons"—eventually resulting in the restriction of working hours for them—will practically determine the working hours of the whole factory. There are about a hundred "young persons" between the age of 14—16 employed in our factory. If adult labour requires to be restricted, though I am entirely against any such restriction, I think it would be preferable to fix a maximum number of hours, leaving it to the discretion of each individual employer to settle the time for the commencement and the termination of the day's work. I do not approve of the suggestion to obtain factory inspectors from the United Kingdom; they would take a long time to learn the habits and customs of the Indian workmen. I don't consider it necessary that factory inspectors should received their training in England.

Oral evidence.

Witness had been connected with the industry since 1892. His mill worked from daylight to dark and he had to pay higher wages in order to keep his men and compete with the electric light mills. This increased the cost of production to some extent. Operatives would not work harder to earn more money. They were too illiterate, and would have their own way, whatever the cost. He had noticed neither an improvement in skill nor in their application to their work; the operatives were the same now as when he first knew them. At his mill 10 *per cent.* were absent for more than four days in the month. An adult would not work longer than two years before returning to his country; and if the rains were good, he would go more frequently. Witness would not describe the operatives as a sober class, for if they had money, they could not refrain from drinking. In fact, they had to drink after a long and tiring day's work. The sober ones drank molasses mixed with water, and the others went to the liquor shops. They drank rather for enjoyment than for intoxication. Witness did not think that the sunrise to sunset day affected the health of the operatives, because in the long days they had frequent intervals of rest. In his opinion the adult should be allowed to work his own hours. The long hours of 1905 were purely a question between employers and employed, for the workmen could have their own way in regard to hours if they liked.

WITNESSES Nos. 78, 79 AND 80.

Messrs. Nathan, Mayall, and Crabtree.

Messrs. S. A. Nathan, superintendent of Messrs. E. D. Sassoon and Company's Mills, A. Mayall, manager of the Jacob Sassoon Mills, and R. H. Crabtree, manager of the Alexandra and E. D. Sassoon Mills.

Written evidence.

A statement, showing the number of looms and spindles and the number of hands employed, is appended:—

Mills.	Spindles.	Looms.	Work-people employed.			
			Men.	Women.	Children.	Total.
Jacob Sassoon Mill	93,638	1,810	3,496	745	46	4,287
E. D. Sassoon Mill	50,784	751	1,478	340	12	1,830
(Under erection)	22,228	...	...	...	...	...
Alexandra Mill	29,350	734	1,169	168	13	1,350
(Under erection)	10,682	...	...	...	...	...
Rachel S. Mill	...	2,000	1,300	250	..	1,550
E. D. Sassoon Turkey Red Dye Works.	...	...	182	43	...	225
Total ...	206,682	5,295	7,625	1,546	71	9,242

The following shows the number of days over 12½ hours worked during the last ten years :— Messrs. Nathan, Mayall, and Crabtree.

Year.	Jacob Sassoon Mill.	E. D. Sassoon Mill.	Alexandra Mill.	Rachel S. Mill.
	Days.	Days.	Days.	Days.
1897	102	...	...	...
1898	143	...	...	...
1899	138	...	...	...
1900	76	...	...	...
1901	285	...	...	...
1902	305	...	...	...
1903	269	101	...	...
1904	112	66	...	...
1905	234	101	99	67
1906	274	131	133	103

The average daily number of hours worked during the above periods has been :—

Jacob Sassoon Mill.	E. D. Sassoon Mill.	Alexandra Mill.	Rachel S. Mill.	E. D. Sassoon Turkey Red Dye Works.
Hours. 12½	Hours. 12	Hours. 12	Hours. 12	Hours 10

If certificates of physical fitness as well as of age are required prior to the employment of children on half-time, we consider two weeks a reasonable time for the employé to be allowed to work pending examination for a certificate. Medical examination for certificates should be held every two weeks Medical examination for certificates of physical fitness for half-timers to work as full-timers would be most unsatisfactory. One examiner may think a child weak, while another may think that, though not robust, it may still be fit to work in textile mills. The creation of a class of "young persons" we are not in favour of, but if adopted, and their hours of labour restricted, the mills will have to run less hours, as the majority of the persons employed in the mills may be classed as "young persons." It is impossible to supply any information as to the probable number of "young persons" between 14 to 16 employed in our mills. The workers have no idea of age.

If the hours of labour are restricted it would be preferable to fix a maximum number of hours to be worked. Inspectors with Indian training in cotton mills would be preferable to inspectors recruited or trained at home. Elasticity in any law that may be passed should be allowed The working hours of adult males should not be limited; there is no restriction in England, and none should be introduced here. The physique of the workers has not been affected by long hours A great amount of time is spent on their meals, loitering about the mill and latrines, while the mill is running. Unlike English operatives, they do not work continuously for a number of years. They generally go to their homes in the country for a rest, and to attend to the cultivation of their lands. It is not desirable to have a special register for all workers under 16 to facilitate inquiries as to physical fitness; the question of age is difficult to ascertain, and once passed as a full-timer that should be sufficient. Women should not be employed at night No change is necessary as regards the age limit of children allowed to work in factories. Regarding certificates of age and physical fitness required before children are allowed to work in factories, certificates of age only are quite sufficient. Regarding certificates of age and physical fitness for half-timers passing as full-timers, we consider certificates of age sufficient. We do not consider it at all necessary to have a special law for the regulation of the working of sets for half-timers. All our mills work in sets now. Elementary education for children is provided by Messrs. E. D. Sassoon and Company at their own expense. We should not make it compulsory in all cases. The practice of young children accompanying workers to dangerous parts of factories is guarded against now in the best manner possible. It is not necessary to have any special prohibition. Testing of air in textile mills is not necessary; our mills are as perfect as could be in a cotton mill. We consider mill premises much more healthy than the small and crowded rooms in the *chawls* the workmen live in. No standard of moisture for the air in factories is required. All mills in India have the latest humidifying systems, much more so than Lancashire. A standard of purity of humidifying water might be fixed. Municipal water should be used in the City of Bombay. Latrine accommodation of 1 seat for every 25 workers, and separate urinal accommodation, is not necessary. Considering the large number of hands employed compared with England, to provide seats for 1 in every 25 workers would require an enormous expenditure in land and buildings, and would increase loitering. It is advisable to have all doors of working rooms hung so to open outwards, as a precaution in case of fire. Further precautions for the fencing of machinery are not necessary. It is having every attention. Full-time medical inspectors of factories should be appointed to assist the present Inspectors.

Witness stated that 13 hours was the longest time his mills had worked. The electric light was introduced this year. If the hours were restricted, it was possible that the men would work more steadily, but he foresaw considerable difficulty in getting them to remain at their work. In his opinion the average production *per* hour was the same in the long days as in the short days. Mr. Crabtree. *Oral evidence.*

He had never seen the men exhausted after their day's work in the hot weather. His mills worked up to 7 P.M. (Bombay time) and the operatives had never complained of late hours. They were supposed to commence at 5-15 A.M. (Bombay Time), but the mill was never in proper running order until half an hour later. Witness could express no opinion about the amount of time wasted. Twelve *per* cent of operatives were out all the time He had not tried the pass-out system. If the hours were fixed at 12, the mills would make up that amount in the cold weather by working by electric light. The output by electric light working was equal to the daylight output, *per* hour, but the work was not turned out quite so perfect. The hands were more independent than they were three years ago. When the operatives worked now by electric light, they did so for the money, and not because they were told to do so. He considered they were capable of working 13 hours a day, excluding the half-hour interval. The long hours of 1905 were excessive, and ought to be prohibited. He would prefer a maximum number of hours to be fixed, leaving the particular mill to work its own 12 or 13 hours in the course of the day. A register of young adults would mean a great deal of trouble in investigating the age of the persons concerned. He kept a register of half-timers, but a register of young persons would involve 34 *per cent* of the employés in his two mills He objected to the young persons' class, because it was so difficult to arrive at a correct age The young adults, too, did not require further protection. Considering the work they did, and the way they did it, he thought they were equal to a full day's work, but if they were working under Lancashire conditions, he would say it was too hard for them The Indian operative did not do half the work of an English operative, in addition to which the former was always taking time off. Up to three years ago the purity of air test had not been a success in England, and he objected to it being introduced in India. They had a humidifying apparatus in the mill, and the water used was taken from the tank which was sometimes foul. All water used for this purpose should be obtained from a specified source, and there should also be a separate boiler for it. The present latrine accommodation was not insufficient or overcrowded; it was more a question of finding room for new latrines rather than of any particular objection to providing more seats All his half-timers attended a school situated in the vicinity of the mill. There was no compulsion used, and he thought they all went every day. An average weaver earned from Rs. 25 to 26 *per* month. They went out of the mill as much as they liked, leaving their looms in charge of an adjoining weaver. At present it was impossible to employ women on account of the restriction of their hours He considered it advisable to increase their working day to 12 hours, which would be a help to labour. Witness did not consider that the Indian operative was as much exhausted after his 13 hours' work as the Lancashire operative was when he left the mill. In Lancashire a man had to work. In India he did not In his opinion the operatives were beginning to combine, and Mahomedans and Hindus would now mix together in decided contrast to the conditions prevailing a few years ago He had had trouble in the spinning department, but the men did not win. Half-timers only worked about half the time that they were in the mill Witness would not describe the operatives as a drunken class: there were very few real drunkards. They were, however, badly off, many being in debt, and in the hands of the *marwaris*.

NOTE.—Messrs. Nathan and Mayall did not attend for oral examination.

WITNESS No. 81.

Mr. Bomanji Dinshaw Petit, Bombay.

Mr. B. D. Petit. *Written evidence.*

I am the senior partner of Messrs D. M. Petit, Sons and Company, agents of the Manickji Petit, Bomanji Petit, Dinshaw Petit, and Framji Petit Mills I am also senior partner of Messrs. B. W Petit, Sons and Company, agents of the Emperor Edward Mill, the presses and gins of the Godaveri Valley, Parbhani and Osneri Ginning and Pressing Companies, Limited The contention that in no other civilized country in the world is there any restriction put upon adult labour, and that it should not be limited in this country, is not to be lightly brushed aside. It has much force in it, and is worthy of serious and mature consideration. Before finally taking the extreme and drastic step of limiting all adult labour, and before embarking upon a measure which is quite unprecedented in the annals of all legislation, British or otherwise, I think it would be better if instead of promiscuously restricting all adult labour to 12 hours a separate class of "young persons" between the ages of 14 and 20 were created, and their hours of labour restricted by legislation to 12 working hours *per* day There is bound to be in every mill a certain percentage of persons between the ages of 14 and 20. If these persons were prevented by law from working more that 12 hours a day the mill could not be worked more than 12 hours without the aid of these "young persons," and solely by the employment of persons above the age of 20 Thus the limit of 12 hours for all adult mill operatives would be secured without directly calling in the aid of legislation to restrict *all* adult labour. According to the above suggestion the mill-hands above the age of 20 would be free to work as many hours as they chose, but these "young persons" of whom there is a fairly appreciable percentage in every mill form so integral a part of the whole mass of operatives that this check alone, as a matter of economic working, would practically determine the hours during which the machinery would run, and would operate to debar all adults in the mill from working more than 12 hours. If, however, it is not deemed expedient to adopt any such suggestion, and if the Government decide upon taking all at once the extreme step of restricting all adult labour, I think it would be advisable to prescribe the legal working hours to be, except where working by shifts, from 6-30 A.M. (S. T.) to 7 P.M. (S. T.) so that, half an hour being allowed for recess and tiffin, the actual working hours would come to 12. These hours, *viz*, 6 30 A.M to 7 P.M., are recommended for Bombay only. If the working hours for all adults are restricted by legislation, there would be no necessity to create a special class of young persons Under the circumstances the present distinction of half-timers and adults would be sufficient. It is not desirable to raise beyond 9 years the present minimum age at which children are allowed to work in factories I should think that 14 years ought to be the minimum age for adult labour. A person over 9 years who has not completed 14 years should be treated as a half-timer. Before children are allowed to work in

factories, a certificate of age should be required. If, however, the question of age cannot easily be settled, owing to the absence of the birth or vaccination certificate, certain tests of physical fitness should be prescribed, *e g.*, height, number of teeth, &c., in order to ascertain the age A certificate of physical fitness, apart from this, is not necessary. If a special class of "young persons" is created, under the circumstances suggested above, it should be rendered obligatory on every person seeking work as a "young person" to produce a certificate of age. It would be much better if the children were required by law to work in two sets, *e g*, the first batch might commence work at 6-30 (S. T.) and finish at 9-30 A.M. and be replaced by another batch; the first batch has then to attend the school attached to the mill from 9-30 to 12-30. After tiffin this batch resumes work in the mill from 1—4 P.M. It can go home at 4 P.M. The second batch should come to the mill at 9 o'clock, and wait in the school room till 9-30 A M. (S. T.), and commence work at 9-30 and leave off at 12-30 P.M. They should attend the school after tiffin from 1—4, and then attend to their work from 4—7 P.M. It must be made obligatory on the factory owners to provide elementary education at their own expense for children working in their factories. They must pay the salaries of the school-masters, and provide the children with books, slates, &c., and not allow the school expenses to be a burden on the children in any way. Apart from drawing the attention of the mill operatives to the danger incurred by the children, I am not in favour of any rule being introduced prohibiting non-working young children from accompanying workers to what are styled the "dangerous" or unhealthy parts of factories. In my opinion the physique of workers has been affected by long hours. I am against all employment of women at night in factories. Questions of ventilation, sanitation, &c, are such as cannot be said to be ultimately or definitely decided for factories even in England. If the Government prescribe a practicable and reasonable (and not a very high) standard, the mill-owners would not mind following the same. The present standard of latrine accommodation, *viz.*, one seat for every 50 workers, is not in need of any change, but there should be separate urinal accommodation. The suggestion to prescribe that all doors of working rooms must be so hung as to open readily from the inside outwards, in case of fire, is a good one and might be adopted. It is not necessary to appoint full-time medical inspectors of factories to assist the present inspectors. Assuming that it is eventually decided to restrict the hours of adult labour, I think the restriction should take the form proposed, *viz.*, the imposition of definite time limits beyond which no operative could be legally employed in a particular place. I am not in favour of fixing a maximum number of hours and then leaving it to the discretion of each individual employer to settle the time for the commencement and the termination of the day's work. I am firmly of opinion that there should be uniformity in the administration of the Factory Act throughout British India, and if it could be managed the same regulation should be made to prevail throughout the Native States in India, as otherwise there is the likelihood of an unfair competition. If it is eventually decided to introduce a law more stringent than that at present in force, the inclusion of provisions introducing a certain amount of elasticity in its actual operation would be welcome and appreciated, as it would tend to remove the sting, allay the heart-burning, and mitigate the hardships, if any, caused by the Act. At the same time the elasticity should not be so great as to make the new Act a dead-letter. If a law is passed restricting the hours of work of the operatives in the mills, that law should be made to apply equally to the ginning and pressing factories.

Mr. B. D. Petit.

Oral evidence.

Witness spoke from 30 years' experience, and said he had neither noticed any increase in the skill of the workmen, nor improvement in their application to their work. He agreed with some restriction being placed on the adult working day. Before the introduction of electric light the mills worked from sunrise to sunset, and the electric light was brought in to obtain an average 12 hours' day. As the prospects of the industry improved, the hours of work were increased, and operatives went to those mills where they could obtain more wages by working long hours. It was his opinion that the health of the operatives was injured by these long hours, in support of which he stated that his mill managers told him that whenever a fairly heavy article had to be lifted or removed, a greater number of lands was required more than was previously the case. Witness did not work the very long hours, but increased his rate of wages to retain his men. The output of yarn converted into 20s *per* spindle in the short days was about 6¼ ounces, and in the long days, 7½ ounces, and of cloth in the short days 10½ to 11 lbs. and in long days 11½ to 12 lbs. In order to arrive at a restriction of the working hours of adult labour, he favoured the formation of a class of "young persons" between the ages of 14 and 20. In the Maneckji Petit Mill he had 4,210 hands, and the proportion of persons between the ages of 14 and 20 would in the different departments work out as follows:—

Department.	Total hands.	No. between 14 and 20.	Percentage.
Ring	1,100	563	50
Card room	700	165	23
Sizing	550	50	10
Weaving	1,030	166	16
Thread	400	25	6
Reeling	430	170	39
Total ...	4,210	1,139	16 *per cent.*

From these figures, showing a percentage above 25% for young persons between 14 and 20, the witness thought that the number of young persons from 14 to 20 would be so large as to determine the working terms of the mill. But if, with a limit of 14 to 16, the percentage in mills generally came to about 25% of the total hands, there would be no necessity to extend the age limit to 20. Witness did not find that the men left his mills. He always used a good quality of cotton, and, there being less waste, the operatives preferred to stop with him. The production at his mill with short hours was nearly equal to the production at those mills which worked long hours with electric light. This was owing to the better quality of cotton used, and not to the greater industry of the men. His workmen obtained the same wages as were paid in the long-hour mills, and they also had the benefit of a benevolent fund, doctors, and *chawls*. He charged Re. 1-8 for a room, compared with an outside charge of 3 to 4 rupees. Directly a room in his *chawl* was

Mr. B. D. Petit.

empty, there were several applicants, and it was his experience that if *chawls* were built, mill people would live in them. The cost of building *per* room was Rs. 400, exclusive of the ground value. The elderly people retired to their country after having saved some money, and he did not think that a large proportion of the operatives were in debt. Some spent money in drink, and they were becoming extravagant; they travelled in trams and drank soda water. Witness would not leave it to the mills to fix their own hours. He would have the same hours for all Bombay mills. The workmen would not work harder in order to obtain higher wages. During the first plague scare in 1896 or 1897, they worked a 10-hour day for three months, and there was no increase in production *per* hour. In his opinion the operatives were as slack in their habits as ever, and in the course of a 13 hours' day they were only at the machines from 10 to $10\frac{1}{2}$ hours, excluding the half-hour interval.

In the 10 hour days of 1896 or 1897 all the mills were short-handed, and the conditions were abnormal, consequently statistics would be of very little value. Proper statistics, however, could be obtained from the period recently when the hours were reduced owing to the glut in the China market. The restriction of hours would injuriously affect the spinning mills whenever there was a brisk demand in the China market. It would not affect weaving so much as we export very little cloth to China and Japan. India had already lost the Japan market, and now she had to fight hard against Japan in the China market From the point of view of foreign competition the working hours should not be restricted, but he looked at that question from the humanitarian point of view. Indian mills might also supply the Indian market more largely by spinning finer counts, through importing Egyptian or American cotton. Thereby they could compete with English cloth. He thought they could also have more weaving mills, and so altogether the restriction of hours would not affect them very much. It was his opinion that women could not work 12 hours owing to their domestic duties necessitating their going home previous to the men, in order to get the evening meal ready Witness would restrict the hours of labour in ginning factories. His schools had been a success, and all the boys attended. A fixed 12 hours' day would mean the general introduction of electric light. Witness tried to close the mill for half an hour in the morning, and for a half-hour at mid-day, in order that the workers might take their food, and answer the calls of nature during these intervals. They did not take advantage of the arrangement, however, but took their food at any time they could while the mill was working.

Witness No. 82.

Mr. Vandekar.

Rao Bahadur Vithalrao Krishnaji Vandekar, J P., President of the Maratha Samaj.

Written evidence.

The working hours of adult males should be limited, as the physique of workers has been affected by long hours. This I know because I come in contact with them, as I am of their caste, a *maratha* The maximum working day hours should be 12, except in mills working by shifts. It would therefore be advisable to prescribe —

that the legal working hours should be from 6 A.M. to 6-30 P.M. except when working by shifts;

that the engine should be stopped for half an hour between noon and 2 P.M.,

that in factories working on the day shift system the legal working hours should be from 5 A.M. to 8 P.M, provided that no adult male should work for more than 12 out of every 24 hours.

As the physique of workers between the ages of twelve and fourteen has deteriorated on account of their employment as adults, it is necessary to create a special class intermediate between the half-timer and the adult, whose working hours should not be more than nine The employment of women at night should be prohibited. The minimum age at which children should be allowed to work in factories should be nine. Certificates of both age and physical fitness, with thumb marks, should be required before children are allowed to work in factories. Similar certificates should be required before children are admitted to work as adults. It should be prescribed by law that children should be employed in double sets Factory owners should be obliged to provide elementary education for children working in their factories.

Oral evidence.

Witness stated that he had had only an indirect connection with mill work. He came in contact with the operatives, and was president of his caste community, which was largely composed of mill-hands. On enquiry he found that there was a desire for a 12 hours' day. Long hours, and in fact the present working hours, affected their health. He thought that a continuous day of more than 12 hours must affect their health. He did not agree with the statement that the hands idled away a great deal of their time. They went out of the mill five or six times a day, and spent three minutes out each time. It was not the custom of the operatives to take long rests in the day, because if they went outside too much, they would lose their wages. He did not think that their wages would be appreciably reduced if a 12 hours' day were enforced. He had not heard of any man who had left a short-hour mill for a long-hour mill. The men did not want to have their wages reduced, and they did not want to work more than 12 hours. He approved of the "young person" class working for 9 hours, but if that meant that the adult could only work similar hours, owing to the closing of the mill, then he withdrew his approval. Women should not work in mills after 7 o'clock at night. It was his opinion that mill work was harder than outside work, but that the operatives had become accustomed to it. He approved of the age certificates being given after a strict examination, but thought that if the examination for physical fitness was overstrict, then it would be hard on the children. Mill-owners should be compelled to educate the children, who should have to attend a school in the mill compound. He would have six hours' work and 3 hours' school, and he did not think that these hours were too long. If they were educated, he thought they would become more intelligent workmen. Mill hands did not save money, but he would not say that they squandered it. Often one man had to support a large family. When they were unable to work any longer they went to their native country. His interest in the mill-hands was chiefly confined to the question of the working hours. He had never enquired into the origin of a strike. He remembered

the strike of 1905, but could not say what it was about. He thought it was against working by electric light.

Witness No. 83.

Mr. D. Dinshaji, manager with Messrs. Greaves, Cotton and Company, Bombay.

Mr. D. Dinshaji. *Written evidence.*

I am the manager of the Palej Lal Gin and Press Company. We employ 300 men, women and children in our ginning factory and press, and work for approximately three months during the year from about the end of January to the end of April, the usual working hours being from 6 a.m. to 8 p.m. when work is light, and from 4-30 a.m. to 10-30 p.m. when work is in full swing—the latter period, however, is for about six weeks only in the year. The average number of hours worked by a person employed in our ginning mill is 16 hours and 30 minutes, deducting 15 minutes for engine oiling. They have fully two hours' rest in this time. They generally go and spend half an hour or so, at an interval of every four hours, to cook or take food, to fetch or drink water, to smoke and to go to the water closet, etc. In their absence their work is looked after by six spare men and by their neighbours. I do not approve of the proposal to bring ginning mills and presses under the Factory Act. There is a scarcity of labour as it is, and I fear there will be a greater scarcity still if the Factory Act be applied. This class of labourer comes down from other districts, and many of them have their own fields to look after and to prepare in time for the monsoon, while others have to work for the farmers with whom they are in close touch, and who meet their wants in case of need. Consequently they must return to their native place in time to get the above mentioned work done. If the Factory Act be applied to ginning mills and presses in British territory, it should also be applicable to those in the Gækwar's territory. Palej is a British village situated near the border of the Gækwar's territory, and there is a danger of all cotton being taken to factories in that territory. This would eventually be detrimental to our trade. I do not approve of the idea that the employment of women on night work should be prohibited. They have only to work about three months in a year, and it does not affect their health in the least, on the contrary it helps them to make money, and to spare the same to meet their wants at home. They have to do easy work all the time. If the Factory Act be applied to all ginning mills and presses, I suggest that the daily working hours should be, say 15 hours, without any restriction of the working hours of women and children, as male labour is very hard to obtain for ginning mills and presses. It is customary with this class to bring down the whole family, with the adult males on whom they are quite dependent, and if there be any restriction, they would naturally be inclined to turn against such work. If the limit of working hours be reduced, trade will suffer a good deal, because then sellers will not be able to deliver cotton in time against contracts of sales in Bombay. In many ginning mills the line shaft is inadequately fenced. I agree with the view of fencing the same, and see no objection if the line shaft be cased between the drums. Women should be prohibited from working in front of the opener. There are no stones whatever in cotton of our district. I have had no accidents in my ginning mills and presses during the last five years. Out of the 300 workmen nearly three-fourths do their work by shift—a fact which I bring to the notice of the Commission.

Oral evidence.

Witness stated that the usual working day in ginning factories and presses was 16 hours, and the season lasted for three months. He could not afford to pay higher wages than those now given to the work-people. There was a general scarcity of labour, and the gins could not profitably bear any additional charges for labour. He approved of gins and presses being brought under the Act in regard to fencing of machinery, latrines, etc., but not in regard to labour. The hands did not work continuously, but took frequent intervals of rest, and they were enabled to do so through the employment of extra hands. Witness would not prohibit women from working at night, as often widows wanted the money with which to support their family. The work was lighter than mill work and he had not noticed any deterioration in the physique of the workers. The hands had a holiday when the engine stopped for cleaning and repairing, and on festivals. It was essential that the work should be concluded in time to permit the workers to return to their fields before the burst of the monsoon. They were paid 4 annas for a 16-hour day, and by overtime they might earn 5½ annas a day. Witness contradicted the statement that labour was plentiful and that labourers would come if the pay was reasonable. Witness contended that in his district 4 annas a day was not at all an unreasonable wage.

Witness No. 84.

Mr. Phirozsha Bomonjee Petit, of the Emperor Edward, and the Petit Nagpur Swadeshi Mills.

Mr. P. B. Petit. *Written evidence.*

Having carefully considered the question of mill labour I incline to the opinion that State intervention is necessary in the interest of mill operatives, with a view to imposing a reasonable restriction on their hours of labour. I am aware that no such restrictions exist in any other civilised country (except that the Government of India have thought right to interfere with adult labour in the mines of Bengal and elsewhere in India), but I do consider, nevertheless, that the circumstances of India are peculiar in this respect, and therefore justify legal intervention, not only because Indian operatives are, from various causes, of inferior stamina and weaker physique than their *confreres* in other countries, but also because they are less intelligent and consequently unable to safeguard their own interests in the absence of labour unions and guilds such as exist in England and other European countries. Their greed of gain also impels them to work at present in many mills longer than is either reasonable or good for their welfare. I consider it, however, to be the first concern of the common-wealth to save the poor workers from the cruelty of greedy employers. It is neither just nor humane in my opinion so to grind men down with excessive labour as to stupify their minds and wear out their bodies. Daily labour should, therefore, in my opinion, be so regulated as not to be protracted over longer hours than is reasonable. It must also be remembered that the working man needs rest and leisure to attend to his family and his domestic concerns, and for self-education. In some mills the hours of labour are too long, and the consequent strain and tension, coupled with

Mr. P. B. Petit.

the unhealthy conditions of living in the case of Bombay, must tend to weaken the wage earners, both male and female, and also effect their progeny, and eventually curtail life itself. The necessity for curtailing the hours of labour has long since appealed to the humanitarian feelings of the "Bombay Mill owners' Association," an organisation representative of the mill-owners, who on more than one occasion framed resolutions curtailing the hours of labour But this Association lacks the power to enforce its decisions, and in consequence of the want of united co-operation on the part of those who attended the meetings of the Association, the situation remained just as it was. I think the suggestions put forward by some to create a special class of "young persons" by law a good one, calculated to automatically stop the working of mills for long hours, thus indirectly restricting adult labour. This argument may hold good in case of a *combined spinning and weaving* mill only where a certain percentage of "young persons" is necessary for spinning operations; but I am afraid that the suggested remedy would utterly fail in the case of *purely weaving mills* (which having no spindles procure their yarns from outside), or for the matter of that in the case of a dyeing mill or a flour mill or silk factory or other factories where "young persons" between the ages of 14 and 20 are not absolutely indispensable, thus allowing them a free hand to work as many hours as they like to the detriment and disadvantage, and the consequent handicapping, of a factory that is affected by the creation of such a class. For the foregoing reasons, I strongly advocate the necessity for the curtailment of the hours of adult labour by legal intervention, and consider that the working hours should be except when working by shifts, from 5-30 A M. (Bombay time) to 6 P M. (Bombay time), allowing half an hour for recess, and to enable the operatives to take their midday meal. Thus the actual working hours would not exceed 12 throughout the year, which I consider fair and reasonable. I am well aware that such a restriction spells loss to mill-owners owing to foreign competition, but I strongly advocate legal restriction of hours of labour on humanitarian grounds, because I feel convinced that the present system is injurious to the labourers. If adult labour is curtailed as above proposed, there will be no necessity for the creation by law of a special class of workers intermediate between the half-timer and the adult labourer, and corresponding to "young persons" under the English Act, and the existing distinction of half-timers and adults need not be disturbed. I do not think it necessary or desirable that the present minimum age of 9 years at which child labour is allowed in factories should be increased. I think 14 years might be the minimum age-limit for adult labour, any person between 9 and 14 being classed as a half-timer I think that before children are allowed to work in factories and mills, certificates of both age and physical fitness should be required. If the age cannot be exactly ascertained, it might be approximately given judging by the child's appearance, height, size, etc. Similarly before children who have hitherto worked half-time are allowed to work full-time as adults on attaining their 14th year, I think it is desirable that certificates both of age and physical fitness to work full-time should be required. It is desirable likewise that children should be required by law to work in sets. The first set might commence work at 6 A.M. (Bombay time) and leave off at 9 A M (Bombay time) and be replaced by the second set which would work from 9 A M. to 12 noon. The first batch would then again resume work from 12-30 P M. (Bombay time) till 3-30 (Bombay time), when they should go home, being then relieved by the second set at 3-30 P.M. (Bombay time). This latter set would continue to work till 6 P.M. (Bombay time). In the interests of the children, mill owners should be obliged to provide elementary education at their own expense for children working at their mills. Instruction should be imparted to the children when off duty during the hours of recess. The salaries of school masters, the cost of books, slates, etc, and any other incidental expenses should on no account be charged to the children; on the other hand, it should be fully understood that, beyond providing the necessary facilities, mill-owners will take no further responsibility I think it would meet the requirements if the attention of the mill operatives were drawn to the danger incurred by the children, and if posters were prominently put up in places in the mill premises, prohibiting non working young children from accompanying workers to what are called dangerous or unhealthy parts of mills. I think the engines should be stopped for half an hour between noon and 2 P.M. I firmly believe that the present system of long hours has affected the health and physique of the workers; and I entirely disapprove of the employment of women in factories at night. They should have more time and leisure to devote to their home-work and their household. The present system of latrine accommodation, *viz.*, one seat for every 50 workers, seems to work well, and need not therefore be disturbed, but the provision of separate urinal accommodation should in my opinion be insisted upon. I think the suggestion that all doors of working rooms should be so hung as to open readily from the inside outwards in case of fire, a good one, which might be carried out. I do not approve of the suggestion that factory inspectors should be obtained from the United Kingdom, nor do I think it necessary that they should be trained in England. They should be obtained locally from amongst men having the necessary experience, and thoroughly acquainted with Indian circumstances and conditions. Assuming it is decided to restrict the hours of adult labour, I think the restriction should impose definite time limits beyond which no operative could be legally employed I am not in favour of fixing a maximum number of hours, and leaving it to the discretion of each employer to fix the time for commencing and leaving off the day's work, as that is likely to be abused. I think steps should be taken to ensure uniformity in the administration of the Factory Act throughout British India; and in order to prevent unfair competition the same regulations should be made applicable to Native States in India as well. If it be decided eventually to introduce a law more stringent than that at present in force, it is very desirable that it should contain provisions introducing a certain amount of elasticity in actual operation. Any law passed curtailing the hours of labour in spinning and weaving mills should in my opinion be extended also to pressing, ginning and other factories worked by steam power.

Oral evidence.

Witness stated that he had acted as a mill agent for five years. His mills worked by daylight, and if a fixed 12 hours' day were introduced, then electric light would have to be installed. His hands did not leave for the long-hour mills, as owing to their working with better class cotton they earned just as much wages in his mills. He considered that the production *per* hour was about the same in the long and short days He approved of a 12 hours' day, exclusive of the half-hour rest interval. In his opinion the men of some departments in individual mills had some power of combination. He thought that the "young persons" class would not affect purely weaving mills, which contained only a very small percentage of these young adults. If a "young persons" class were formed,

and adult labour not restricted, it was his opinion that the object aimed at *viz.*, the stoppage of long hours, might not be attained in combined spinning and weaving mills where the spindles were in excess of the number required to supply their looms They would, whilst stopping their spinning department, continue to work their weaving department from the excess produce of the spinning department for long hours, in spite of the introduction of a "young persons" class. This could easily be done in mills working with more than one engine, and masters could work the weaving shed with one engine only without causing any undue strain on the same; further, separate weaving mills would spring up, and work long hours. Witness had not himself noticed any deterioration in the physique of the men, but he was assured by the departmental managers in the mills, who were in daily contact with the operatives, that such deterioration did exist, and that the men also indulged in drink to a large extent. The children at his school were taught to read and write, and the jobbers did not take the children from the school for mill work. Mr. P. B. Petit.

Witness No. 85,

Mr. Gordhandas Khattau, Bombay.

I represent the Khatau Makanji Spinning and Weaving Company, Limited. The number of men working at the mills is 284, women 275. Number of men in dye-house 240. No children are employed. Women are not allowed to work in the bleaching and dyeing houses. The number of men shown above is the average number of hands present. The bleach and dye works have always worked from 7 A.M. to 5-30 P.M. The mill was working from sunrise to sunset till June 1905, and then after the installation of electric light till 7 P.M. The average actual hours are 12¼ nearly from 1905. From June to September 1905 the mill worked for 14 hours. The average production of mule and ring spindles *per* hour is as under:— Mr. Gorhandas Khattau. *Written evidence.*

Mule	20s	0·42 oz.	while working 14	hours a day.
Do.		0·41½ „	do.	13 do
Do.		0·41 „	do.	13 do.
Ring	20s	0·52 „	do.	14 do,
Do.		0·48 „	do.	13 do.
Do.		0·52 „	do.	12 do.

A factory is worked economically if it gets the maximum of production with the minimum of waste, and that was proved to happen when the mill worked the longest time. The employé should be allowed to work for at least a fortnight pending examination for a certificate of age. The present arrangements for medical examination are in my opinion satisfactory. To enact a law not to permit a half-timer to work as an adult, unless medically certified as physically fit for full-time work, will not be practical or feasible. This will make hands leave one place and go to other where they will be allowed to work as adults without such a certificate. I am not in favour of the suggestion for the creation of a class of "young persons" as in the United Kingdom; this will effect the economical working of the factories. I am not in favour of fixing any maximum limit to the hours of work. I would leave it to the discretion of the employers to settle the working hours. It is advisable to allow some few work-people to work on the days when the mill is closed to assist in repairing, etc. The duration of the notice required regarding closing days should be reduced to six hours instead of 24 hours. If it is found necessary by the Government to limit hours, I think 13 hours would be reasonable. The engine should be stopped for half hour between noon and 2 P.M. The employment of women at night should be prohibited. The present limit of 9 years for children is quite correct. Certificates of age should be required. Elementary education should be given by the Municipality or Government in the mill locality during the day and for some hours at night A rule prohibiting non-working young children from accompanying workers is not necessary, as at present they are not allowed to enter the factory.

Witness stated that he did not approve of the long hours of 1905, and considered that some restriction of the working day should be arrived at. The long hours of 1905 were stopped, because the work-people compelled the owners to stop them, and such long hours would never again be worked unless the men themselves agreed. The working day should not exceed 13 hours from start to closing. This would not adversely affect the health of the operatives, and would not injure the industry. Should an increased demand come, then he would meet it by extra spindles. His experience of electric light working was that the men attended more to their work, there was less wastage, and the production was of an improved quality He did not consider that legal interference was necessary to restrict the working day, but if there had to be a restricted day by law, then he thought it better to restrict the hours of adult labour He objected to the proposed "young persons" class, and would still object to it even if the working hours for "young persons" were extended to 13 If the "young persons" class were created, one mill would steal adults from another mill, and run their mill for a longer period, while the other mill would be restricted by the "young persons" hours. When the present children class was created by law mill-owners had that difficulty to contend with, and some mills could only run part of their machinery. He saw no reason to suppose that the conditions would be different now if the "young persons" class were created. In his opinion the formation of this class would mean that mills would try to work with adults only. He did not think that the weavers would agree to work long hours, as they could not do good work by artificial light. The men now were quite independent, and only worked long hours to earn more pay; he did not think it would be a great hardship to prevent them from working more than 12 hours In the bleach and dye works the work was more tiring, and the hours shorter, but owing to the nature of their work their hours were quite long enough. Last year he attempted to work the bleach and dye works as long as the mill, but the men refused. He thought that the mill operative was away for 2½ to 3 hours out of the 12 hours, and the dye-worker was resting 10 *per cent.* of his time. In the mill the hands were very conservative, and would not attempt to take charge of extra frames even though by so doing they would increase their earnings. *Oral evidence.*

Mr. Gordhandas Khattau.

Witness objected to Sunday being made a compulsory holiday, for there would still be 12 practically compulsory holidays over and above Sundays, and both the men and the mills would be the losers to that extent The bulk of the men took either the Saturday or Monday off, as well as the Sunday, and the compulsory Sunday would not stop those holidays. Witness agreed that the half-hour noon interval should be the same in all mills. As a matter of fact the half-hour's rest was not necessary, for they took their food and idled about in the mill at other times He did not see any advantage in increasing the hours of work of women. They had their household duties to perform, and could not come earlier in the morning than they were doing now. He saw no objection to their working on a loom, but men and women in Bombay would not work together. However, if their livelihood depended upon so doing, the caste objection might disappear in time. In any event he did not think that the supply of women was forthcoming in Bombay, even if their hours were increased. There was no objection to this being done, if it was considered advisable, but he personally did not approve of it Women were physically stronger than men, and the caste objection was mainly taken by the women Any working day shorter than 13 hours would injure the industry in its competition with China, in that there would be less production at a greater cost. Japan already was a keen competator, and was selling hosiery in India cheaper than the Indian mills could supply such goods. There was still a big field for the Indian mills in the Indian market on the finer counts. He was not aware that the Indian mills had the coarser counts to themselves, so far as the Japanese mills were concerned The truth about the severe competition was that the Japanese mills were fostered by a sympathetic Government.

WITNESS No. 86.

Mr. Aspden.
Written evidence

Mr. J. L. Aspden, Bombay.

I represent the Sassoon Spinning and Weaving Mills. Persons employed—men 1,792, women 534, young persons 14—16 about 268, and children 44—total 2,638. We work from light to dark and average 12 hours *per* day all the year. My opinion is that a better production is obtained and less waste made during the time worked by electric light, as the work-people stay at their machines and do not visit the closets owing to the darkness outside. The docter visits the mill three times each month, therefore a child should be allowed 9 full days before being presented to the doctor for examination The present system of certificates is good, as a copy can always be obtained from the mills if there are any doubts as to the person not having been passed. The question of the fitness of half-timers for full-time work should be left to the discretion of the medical examiner when granting a full-time certificate. The factory inspectors and medical officers can demand to see the certificate (or copy) of any young person employed, if in doubt as to age or fitness. If the present system is retained it is quite sufficient. I am not in favour of the creation of a class of young persons, as this would most certainly restrict the working of the mills. The proportion of women, young persons and children employed now is not so large as it will be as the mill industry increases. I consider the working time should be fixed at 12 hours *per* day: no mills to commence working before 5-30 A. M, and to be stopped at 6-30 P. M This would leave it to the option of the employer to stop the engine half an hour between 8 and 10 A. M., and half an hour between 12 and 2 P. M. I have no doubt that this system would restrict the mill industry for some time, but eventually the quantity of hands could be reduced, and the work-people would benefit in health by these shorter hours. I do not approve of the appointment of English inspectors. There are suitable men in India (both European and native) who can fully study the English Factory Act without going to England to do so. The law should not be elastic. Any law should be strictly adhered to, or not passed at all. The only suggestion for housing I can make is that cheap land might be granted to mill owners for the building of *chawls* for the work people.

NOTE.—Mr. Aspden did not appear for oral examination.

WITNESS No. 87.

Messrs. Narandas Rajaram & Co., Bombay.

Messrs. Narandas Rajaram & Co.
Written evidence.

We are agents for, or owners of, 5 ginning factories and 6 pressing factories, as under:—

One ginning and one pressing factory at Agra, called the Broach City Press Company, Limited.
Ditto ditto at Palej, called the Broach City Press Company, Limited.
Ditto ditto at Surat, called the Surat City Press Company, Limited.
Ditto ditto at Mahuva, called the Mahuva Press Company, Limited.
One pressing factory at Junagadh, called the Junagadh Press factory.
Ditto at Amrelli, called the Amrelli Press factory.
One ginning factory at Bavla, called the Bavala ginning factory.

The number of labourers employed in each ginning factory varies from 40 to 50, according to the number of gins working. One half of this number consists of women, who sit on platforms and keep on feeding the rollers with seed cotton, or *lapas*. A few young boys of about 10 to 12 years are included to relieve and help their mothers, sisters or relatives working on the gins. The number of men employed in a press factory is between 30 and 35; besides these, there are the men of the lashing contractor, who number 30 to 40. About 3 or 4 women are employed. No children are employed in a press. The period of work for ginning and pressing factories varies with the kind of cotton, and the districts in which it is grown. But it is invariably between October and June, at the latest. In Gujarat and Kathiawar, however big the crop may be, out of consideration for the scruples of the Jains, factories are never worked after the 15th day of the Hindu month *Jeth* (about 15th June). With a normal crop, the actual working days for ginning and pressing factories do not exceed 90 days. The usual working hours for a ginning factory are from sunrise to sunset, but with a big crop, or with the approach of the recognised delivery dates for cotton in

Messrs Narandas Rajaram & Co.

Bombay, gins are worked from 5 A. M. to 10 P. M, and presses all through the 24 hours, with a double set of labourers. The average number of hours that a person employed in a ginning factory works is 12; but it does go up to 15 in a good season, when approaching the date of delivery in Bombay. The average number of hours for work in a press factory is 12. As to intervals of rest:—in a ginning factory there is no fixed period when the factory is stopped as a cotton mill is. But the labourers leave their work for about 2 hours in a day, for bath, food, smoke and other necessary purposes. During each such absence, his work is looked after by his neighbour, or by a spare labourer whose number varies from 4 to 6. In a press factory the work is not continuous. There are two sets of men working in a press factory:

(1) those that fill the weight box;

(2) those that press the cotton into the box, press and finish the bale, and then take it out of the press box.

Each set gets about 2 or 3 minutes rest while the other is at work. Again when the pressing of one merchant's cotton is finished the press is stopped for about half an hour before the next merchant's cotton bales are brought in opened and prepared for pressing. The average outturn of a press would be about 14 to 17 bales in an hour, which means an outturn of one bale every third or 4th minute. Thus each set rests for 4 minutes by turns. We do not approve of the proposal to bring under the Factory Act ginning mills and pressing factories, for the following reasons:—

(1) There is no reason shown why restrictions should be put on these operatives. They are not in the same position as operatives in a cotton mill. The ginning and pressing factories being generally in a village, or at any rate in a less crowded place than a mill, the health of the labourers neither necessitates nor warrants so much anxious care at the hands of the Government. Again, ginning and pressing labourers are not engaged on that work for all the year. He or she works in the factory for 4 months at the most, and returns to field work for the other 8 months. To us the application of the Factory Act to ginning and pressing factories seems to be uncalled for as far as the operative is concerned.

(2) We are not aware if the Native States would be called upon to enforce the Factory Act in their dominions, should it be applied to ginning and pressing factories in British territories. But we suppose it cannot be done, as even the Factory Act applicable to cotton mills in Native States differs from the British Factory Act for cotton mills. In this case we strongly object to the Factory Act being applied to ginning and pressing factories in British dominions, as it would seriously handicap the trade in British territory, and also the earning capacity of ginning and pressing factories situated in British territory.

At present *kapas* grown in India is freely taken from Native States to British territory, or *vice versâ*, according as it may suit the *ryots* or the merchants. If the working power and capacity of ginning and pressing factories in British territory be in any way curtailed, all the *kapas* would be taken to the market where it could soonest be ginned, pressed and prepared for sale Cotton has to be sent from the *mofussil* to the Bombay market on or about a certain date for delivery to the exporters, or to the mills there, and these dates of delivery are so fixed that with a normal season and a normal crop the best picking of the cotton may be available for the Bombay market If the working time of the ginning and pressing factories be fixed, or rather restricted, with a crop that may be a little late the required quantity of cotton might not arrive in Bombay on the due dates. Again, with a big crop to handle a fair quantity of *kapas* would be left unginned before the monsoon, or before the prescribed period of stoppage in Kathiawar and Guzarat All the *kapas* would in such cases (which are not very exceptional) go to the factories in the Native States, and the existing factories in British territory would be severely handicapped. Owing to the weak holding capacity of Indian *ryots*, the crop requires to be marketed very soon after collecting. Bales 200,000 of the Broach district are marketed within 3 months after the first picking, and any check in the ginning and pressing capacity of factories in the district would mean encouragement to the factories situated in neighbouring Native States, and higher interest, insurance and stacking charges, which would ultimately tell on the rates realized by the *ryots*. Delay in ginning and pressing would expose the middleman buying the raw *kapas* to the risk of having his purchase spoiled by rain. Factories situated on the border of British territory, and fed by the cotton from Native States, such as those in Miagam and Palej, would suffer most. We submit that the Factory Act should not be applied to ginning and pressing factories at all, and in no case should it be applied if the Native States cannot be called upon to adopt the law in force in British India. Women are not employed for night work in press factories. As to ginning factories, the women have to feed the rollers, which is not as exhausting as work in a cotton mill Again the labourers reside close to the factories, and can leave their work for necessary purposes at their will. Prohibition of night work for them would curtail their wages, and would seriously disturb the labour of the ginning factory, as women form the major portion of the workers. We do not think the women require any check on their capacity or will to work, and with the existing dearth of labourers, the task of the gin-owners would be a difficult one.

Assuming that the Factory Act is to be applied to gins and presses, we would suggest the following provisions:—

(1) it should be applicable to all ginning and pressing factories in India, whether in Native States or British territory;

(2) the existing ventilation in ginning and pressing factories should be approved as that has not been found to adversely affect the health of the workers;

(3) the existing hours of work should not be curtailed;

(4) women be not prevented from taking the part they at present are taking in factories.

The line shafts in our factories work in a closed gutter to which none except the *mochi* or the oilman has access. It may be laid down that the line shaft must be fenced between walls. We

cannot understand why women should be prevented from working before openers. To prevent accidents from stones being hurled out of the openers we would suggest that the raw material be spread on metal or bamboo *tattres*, before being put in the opener. Thus foreign materials like pieces of stones or bricks would generally be removed. There have not been any serious accidents in factories under our control during the last five years.

NOTE.—No oral evidence was recorded.

WITNESS No. 88.

Mr. Dinshaw Adarjee Tata, manager of the Swan Mills, Bombay.

Mr. Dinshaw Adarjee Tata.
Written evidence.

I am of opinion that the working hours of adult males should be limited to 13 hours a day, with half an hour interval in the forenoon, not because the physique of workers is in any way reduced by working longer hours, but because the provision of a fixed and limited period of working will give some control to owners over workmen induced by the chance of earning more pay to work at factories working longer hours. It is not correct to say that workmen complain of long working hours; only those employés who live far away from their factories complain because they cannot reach their homes in good time after the day's work is over At present our factory is working 12½ hours a day, with an half hour interval at noon, but my experience teaches me that mill hands idle more than two hours *per* day outside the mill, and thus work only 10 hours a day. This habit of loitering forces us to engage extra hands and incur extra expense They are prepared to work longer hours, if paid proportionately higher wages after sunset. I know that the physique of mill hands is on an average much better than that of outside workmen. The cause of deterioration, if any, in the physique of workers could be traced to other causes than working long hours in factories. I am not in favour of reducing working hours beyond the time indicated above, as that would simply tempt the hands to pass more time in drinking and squandering their well-earned wages, and would compel them to pass more time in their unhealthy quarters. I do not see how working hours could be restricted to stated hours except by legislation I am in favour of restricting the legal working hours from 6 A M to 7 P.M, with an interval of half hour between noon and 2 P M. In suggesting the above limit of time of working I have taken into consideration the long and short days of the year: it would not be advantageous to commence work at 5-30 A M. during the short days of the year. It is suggested that it may be advisable to create a special class of workers, intermediate between the half-timer and the adult, and corresponding to "young persons" under the English Act. I consider that it is inadvisable and unnecessary to create such a class. The present system of allowing children to work between the ages of 9 and 14 is in my opinion quite satisfactory. There is not so much difference in the physique of an Indian worker between the ages of 14 and 16 as to lead us to create a class intermediate between the adult and the half-timer. If such a class is created it would put the mill-owners to unnecessary expense and trouble, as that class would be allowed to work for a certain number of hours only, but might force owners to pay them full wages, or it might eventually happen that the hours for which this particular class was allowed to work would become the actual working hours of the whole mill In our factory we have no half-timers, as we have mule frames only, but we have about 220 hands between the age of 14 and 18 out of the total number of 800 male hands engaged. The present minimum age of 9 at which children are allowed to work in factories is quite proper, considering the climate and physique of Indian workers, and I am not in favour of raising that age beyond 9. Certificates as regards both age and physical fitness should certainly be required before children are allowed to work in factories, but a certificate of age only should in my opinion suffice for a child on reaching the adult age To disqualify an adult on physical grounds would be to deprive him of the means of honest living. If the suggestion of requiring a medical certificate of physical fitness from an adult who has hitherto worked as half-timer is accepted, I do not consider it would be feasible to prevent a half-timer who is refused a medical certificate as being unfit for full-time work as an adult in the factory in which he has worked from obtaining employment as an adult at some other factory. I have no objection to children working in sets. Personally, I am in favour of elementary education being given to workmen, but it should be provided by the Government or the Municipality, and should not be restricted to a particular class of workmen. A rule should be made prohibiting non-working young children from accompanying workers to dangerous and unhealthy parts of factories, and such a prohibition should be enforced by legislation, but care should be taken in defining and specifying dangerous and unhealthy parts of factories. Although it would entail a great deal of expense to prescribe an analytical standard of purity of air by testing samples of air taken from factories with a view to secure proper ventilation, it would be advantageous if the attempt were made. A similar attempt to prescribe a standard of moisture for factories, with reference both to manufacturing processes and to the health of workers, would also be advantageous; but it should be kept in mind that while carrying on such an attempt no hitch or drawback, either direct or indirect, should in any case be allowed to affect manufacturing processes, and great care should be observed in dealing with the question of different temperatures at different times of the year. A standard which would increase the texture and fineness, without in the slightest degree affecting manufacturing processes, would meet with the approval of all concerned. In my opinion it is not essential to fix a standard of purity for the water used for humidifying purposes, as I consider the municipal water good enough for the purpose. I am not in favour of latrine accommodation being raised to one seat for every 25 workers, for the present arrangement of having one seat for every 50 workers is in my opinion quite adequate. I am in favour of making some provision for separate urinal accommodation. It would be advantageous if it is prescribed that all doors of working rooms shall be hung so as to open readily from the inside outwards in case of fire. The present methods for fencing machinery in factories are quite satisfactory and adequate. Arrangements should be made to secure uniformity in the administration of the Factory Act throughout the land.

NOTE.—The witness did not attend for oral examination.

Witness No. 89.

Mr. Sunderland, manager of the New Kaiser-i-Hind Spinning and Weaving Mills, Bombay.

Mr. Sunderland. *Written evidence.*

I am manager at the New Kaiser i-Hind Spinning and Weaving Mills; we have about 930 men, 194 women and 57 children (half-timers) employed in our mills. I append a statement showing the working days over 12½ hours from 1901 to 1906, for six years; the records for the previous four years cannot be traced:—

Years.	Days worked over 12½ hours.	Average daily number of hours worked. H. M.
1901 ...	91	11 55
1902 ...	49	11 41
1903 ...	79	11 47
1904 ...	105	12 9
1905 ...	97	12 14
1906 ...	132	12 11

In my opinion it is not economical to work long hours, because by increasing the working hours we do not proportionately increase the production, and we find that there is also a much greater percentage of waste. I think the present system of examination of children (half-timers) is good. The examination of half-timers should be as to their physical fitness to work as full-timers, and the examinee must always be provided with a thumb-mark certificate which he must produce on changing employment from one place to another. I am against the creation of a class of young persons. There are a great number of these in the mill, and without them we must stop the mill. The working hours should be fixed by law, and not left to the discretion of each individual employer to settle for himself. The working hours of the day, in my opinion, should be from 6 A M. to 6 P M, with an interval of half-an hour between 9 and 10 A.M., and half-an-hour between 1 and 2 P. M.

Note.—The witness did not appeal for oral examination.

Witness No. 90.

Mr. A. F. Darukhanawala, Bombay.

Mr. A. F. Darukhanawala *Written evidence.*

I represent the Framji Petit Spinning and Manufacturing Company, Limited, as manager. The average number of hands employed in the mill is 1,210 men 160 women and 62 children. I give below the number of days in each year, during the last 10 years, on which the mill has worked over 12½ hours a day, and the average daily number of hours during that 10 year period:—

Years.	Working days of over 12½ hours a day, inclusive of ½ hour's stoppage in the middle of the day.	Average daily number of hours of over 12½ hours' working day, inclusive of ½ hour's stoppage in the middle of the day.	Average working hours *per* day all round the year.
1897	116	13·13	11·49
1898	127	13·12	11·50
1899	137	13· 0	11·56
1900	120	12 59	11·35
1901	147	13·15	11·56
1902	156	13·05	11·37
1903	178	13·04	11·59
1904	166	13·13	12· 0
1905	164	13 16	12· 5
1906	174	13· 4	12· 9

Working days being less on account of plague and short working time of the mill.

If certificates of physical fitness as well as of age be required prior to the employment of children on half time, I would suggest that at least a week's time should be allowed within which the employe be allowed to work pending examination for such certificates, and that the certifying surgeon should attend the mill once a week for the examination of half-timers and others. Certificates of physical fitness are in my opinion not at all necessary for half-timers before they are allowed to work as adults: certificates of age are sufficient for the purpose. Assuming that the recommendation to have physical certificates along with age certificates is accepted, I am of opinion that this principle could not be applied in practice without constant friction owing to the varying opinions of different doctors, and that there would be no safeguard to prevent the half-timers, who are refused certificates as adults in the factory in which they have worked, from obtaining employment as adults at some other factory. There is no necessity to create a new class of young persons, as the persons between the ages of 12 and 14 have been treated as children and not employed as adults, and they are not overworked so as to require special legislation. If the law be eventually

Mr. A. F. Darukhanawala.

amended so as to create such a class and to restrict their hours of employment, the proportion of such young persons will be so large that the hours fixed for them will in fact determine the working hours of the mill, and also a special register will have to be kept for all workers under the age of 16 to facilitate inquiries as to the physical fitness of the youngest adults to work full-time. I am of opinion that there should be no restriction by law of the working hours of adult males. That should be left entirely to their own free will. They do not think themselves overworked, but on the contrary they like to work longer hours, so that they may get more wages. They perfectly understand how to exercise their power in the matter of labour. They have their own associations; if they did not wish to work for longer hours, the mill-owners would be forced to yield to their wishes, as otherwise they would strike and insist upon their demands, They should, therefore, be allowed to exercise their free will in this matter as other outside labourers do.

I do not approve of the suggestion to obtain inspectors from the United Kingdom, as the factory inspectors in Bombay are quite capable men at their work, and they seem to have received a good deal of training in the matter of mill inspection, The employment of women at night should certainly be prohibited. The minimum age of 9 at which children are allowed to work at present is quite sufficient; there is no necessity to raise the age beyond 9. It should be prescribed that children shall not be employed except in regular sets, morning and afternoon. As regards elementary education to children, factory owners should not be compelled to provide the same, but it should be left to their option. There need not be legislation prohibiting non-working young children from accompanying workers to dangerous or unhealthy parts of factories, but factory owners should be advised to issue orders so that non-workers may not enter the objectionable parts. There is no necessity of taking samples of air from factories in India to prescribe an analytical standard of purity for air, as the factories, in my opinion, are provided with sufficient ventilation. There is no necessity to prescribe a standard of moisture for the air in factories. I have no objection to fixing a standard of purity for the water used for humidifying purposes. The present standard of latrine accommodation of one seat for every 50 workers is quite sufficient, with separate urinal accommodation. It is advisable to have all doors of working rooms hung so as to open readily from the inside outwards in case of fire. The present precautions for fencing machinery are quite sufficient. Arrangements should be made secure uniformity in the administration of the Factory Act throughout India. The present medical inspection of children is quite efficient; there is no necessity to appoint full-time medical inspectors.

NOTE.—The witness did not attend for oral examination.

WITNESS No. 91.

Mr. G. F. Horbury, of Messrs. Richardson and Cruddas, Bombay.

Mr. Horbury. *Written evidence.*

We practically employ adult men only. Amongst our 1,800 to 2,000 employés there are 13 women only, and these are employed on extremely light labour, such as brushing and clearing the floors of our work-shops, etc, and not in any actual work directly connected with our business. We have some few rivet boys and apprentices, but these are all over 15—16 years of age. Our hours of labour are from 7-30 A.M. to 5-30 P M., with 45 minutes' stoppage at 12-30 P.M., except when we work over-time for one or two hours three times *per* week. Our total working hours, ordinary time, *per* week are 52½, and it will be seen, therefore, that we work much shorter hours than cotton mills. I believe our work is more strenuous than that in cotton mills, and probably requires greater physical strength. But we find that our men are generally fairly exhausted with their 9½ hours' daily work, and for this reason we endeavour to avoid overtime as the men have not sufficient energy left to make it pay us. I am not, therefore, competent to express any opinion as to the hours of labour in cotton mills and similar factories. But I may say that if the conditions are such as to exhaust the operatives to the same extent and in the same time as in our works, the present working hours are in my opinion too long I think the employment of women at night should be prohibited. In our own case the present regulation of one latrine seat *per* 50 men appears to be sufficient, but we have separate urinal accommodation, and I think the latter is very desirable.

NOTE —It was not considered necessary to call Mr. Horbury for oral examination.

WITNESS No. 92.

Mr. N. P. A. Wadia, Bombay.

Mr. N. P. A. Wadia. *Written evidence.*

The China and Moon Mills, of which I am the managing director, employ hands as shown in the table below :—

Name of mill.	Men.	Women.	Half-timers.	Young persons.	Total.
China Mill ...	500	374	32	200	1,106
Moon Mill	250	200	40	40	530

As regards the time of working, I may say that we have never known what working overtime means in the whole life of our China Mills, which are now working for the last 18 years, and in the Moon Mills for about 8 years our system has been to work from sunrise to sunset, with the usual interval required by the Factory Act. The table below will show our average working hours in

the various months in a year, and we are working at the same average from year's end to year's end from the very start of the mills to date :— Mr. N. P. A. Wadia.

Month.	China Mill.			Moon Mill.		
	Total working days.	Average working hours.	Cleaning days.	Total working days.	Average working hours.	Cleaning days.
		H. M.			H. M.	
January	26	11 19	4	26	11 23	4
February	24	11 42	3	24	11 45	3
March	26	12 10	2	26	12 10	2
April	25	12 43	4	25	12 41	4
May	27	13 6	2	27	13 0	2
June	26	13 0	2	26	13 5	3
July	26	12 49	4	26	12 51	4
August	26	12 38	3	26	12 38	2
September	24	12 16	2	24	12 13	2
October	26	11 52	2	26	11 48	2
November	26	11 36	3	26	11 29	3
December	26	11 20	3	26	11 0	4

If certificates of physical fitness as well as of age be required prior to the employment of half-timers, I do not think it advisable to prescribe any time limit within which the employé should be allowed to work pending examination for a certificate I am of opinion that any such concession is likely to be grossly abused. To begin with I do not consider it at all necessary for half-timers have any certificate of physical fitness, as in my experience I have found that half-timers or adults that are physically unfit to work are not employed at all, as their employment is a decided disadvantage to their employers The latest arrangement instituted for the examination of half-timers is in my opinion a very good one, and one which would in course of time help to wipe out the many tricky ways of working half-timers as full-timers. If it is accepted that no half-timers should be permitted to work as adults unless medically certified as physically fit for full-time work, I think it would require great exertions on the part of the officials concerned to see it well applied in practice. Further, such a rule will be a source of great worry and trouble to the employers. A half-timer when he has grown a little and worked for a time would think he ought to draw more wages and would consequently demand more No such allowance could be made to him lowfully, and consequently a lot of shifts are bound to be practised on both sides The best safeguard against preventing half-timers who are refused certificates as adults in the factory in which they have worked from obtaining employment as adults at some other factory is to institute a rule by which all such half-timers who wish to be employed as adults must get themselves examined at an institution appointed by the Government, outside the factory, and get a certificate duly authorizing them to work as an adult. This certificate to be paid for by himself, and to be his own property, and to be produced by him whenever a question as to his fitness as an adult is raised, either by his employers or by a factory inspector. I am not in favour of creating a class of young persons, as I am of opinion that young persons, women and half-timers, taken as a whole, will on an average be equal if not more than the adult workers. Consequently the time limit of their work is bound to limit the working time of the factory, and most probably more in one particular place than another. In my opinion the suggestion of definite time limits to be prescribed within which the employment of operatives would be legal had better be left alone. It is only necessary to fix the maximum number of hours beyond which no operative could be legally employed. The time limit is bound to be adjusted by itself. The operatives when they know that they have to work a certain number of hours only will require their own hours in different places and localities to suit their own conveniences Further, in continuation of this rule concession must be made for overtime work in cases where necessary, *e.g.*, for repairing of machinery, etc., that may have gone wrong during working hours and such other work which must be done after the closing time. I do not approve of the suggestion of getting inspectors from the United Kingdom for factory work in India. I consider it absolutely necessary for a man who holds the post of factory inspector not only to be conversant with all the ways of our factories and labour, but he must also be a practical man, that is, a man who has worked in an Indian factory for some time in some responsible position. As to the elasticity of the law which may be introduced, I am of opinion that the more elastic it is the more likely it is to be stretched. Though we have never worked overtime ourselves, I have personally ascertained that the average production in our Indian factories goes down from 25 *per cent.* to 30 *per cent* in *well managed* concerns after sunset till the closing time, that is, the time worked with electric light, and from 30 *per cent.* to 40 *per cent.* in other factories, even though the rate of wages is doubled after sunset. I am of opinion that net 12 hours of working, and uniformity of rates all round, would add enormously to efficiency, and lead to an increase of our industry in general.

Note.—The witness did not attend for oral examination.

Mr. Dwarkadass Dharamsey.
Written evidence.

Witness No. 93.

Mr. Dwarkadass Dharamsey, Bombay.

I am senior partner in the firms of agents who manage and represent the Bombay Cotton Manufacturing Company, Limited, the Lakhmidass Khimji Spinning and Weaving Company, Limited, and the Tricumdas Mills Company, Limited The respective numbers of men, women and children employed in each of these mills are given below :—

	Men.	Women.	Children half-time.
The Bombay Cotton Manufacturing Company, Limited	963	187	*Nil*
The Lakhmidas Khimji Spinning and Weaving Company, Limited ...	852	598	23
The Tricumdas Mills Company, Limited	918	601	*Nil*

I cannot provide the Commission with statistics showing the effects of working days of varying length (*a*) on the production *per* spindle of fine yarn, (*b*) on waste, and (*c*) on the economical working of the factories, no record was kept with this object in view, and it is difficult to get the information out now from the records I have. If certificates of physical fitness as well as of age be required prior to the employment of children on half time, it will in my opinion be necessary to prescribe some reasonable time-limit within which the employé should be allowed to work pending examination for a certificate If this is considered necessary I should suggest at least a week. I do not think any further examination for half-timers or any other employés necessary, other than what is in vogue at present. I am of opinion that if a half timer is not to be permitted to work as an adult unless medically certified as physcially fit for full-time work it will be difficult to apply this principle in practice. I am not in favour of the creation of a class of young persons. If the law be eventually amended so as to create such a class and to restrict their hours of employment, I anticipate that it will be very difficult to fix a uniform number of working hours for mills to work. The first effect will be that labour will be upset by each one trying to work his mill without such a class, and in the end every mill will regulate its working hours according to the administrative ability of those responsible for the management of the mill and especially of the manager in charge. The proportion of women and half-timers will not be so large that, as a matter of economical working, the hours fixed for these two classes of workers will determine the hours for which the machinery will run. I cannot say definitely whether the proportion of young persons will be so large or not as to regulate the working hours. I am against any definite time-limit being prescribed for the employment of operatives. Assuming, however, that it is eventually decided to restrict the hours of adult labour, I am of opinion that it would be preferable to fix a maximum number of hours, leaving it to the discretion of each individual employer to settle the time for the commencement and the termination of the day's work I think any law made with provisions introducing a certain amount of elasticity in its actual operation will be a dead letter If there be the least doubt about the law being useful, then the best way is not to make the law. As a class mill-hands generally are far better off than labourers in other departments of trade. I do not see why legislation should be thought of with regard to labourers in factories, which means mostly labourers in mills As instances of labourers or workmen having to do harder and more continuous work, though ostensibly for a shorter period, I would cite labourers in the docks and workmen in the press sitting up and doing night work under strong gas light, and *begaries* working in open spaces over road repairs, and building works under the immediate control of, and severe exaction of work by, their *muccadam* If Government are inclined to frame any legislation for labour such legislation should be applied to all kinds of labour, and should not be made invidious and applied to factories only. As a class the physique of the workers has not been affected by long hours. With natural light in the hottest part of the year the longest day a factory works is 13⅓ hours, and I do not see why they should not work for longer hours than are given by natural light during those portions of the year when the atmospheric conditions are more suitable I think the hours are limited under the present Act between 5 A.M. and 8 P.M. I would suggest that factories working from 5 A.M. to 8 P.M. should give a recess during the middle of the day for one hour. So far as mills are concerned I think the employment of women at night should be prohibited The minimum age of a child should not, in my opinion, be raised beyond 9. I think certificates of physical fitness in addition to the certificate of age should be required in cases of children when they first join a mill.

Statement showing the hours worked.

Year.	The Bombay Cotton Manufacturing Company, Limited.		The Lakhmidas Khimji S. and W. Company, Limited.		The Tricumdas Mills Company, Limited.	
	Number of days on which the mill worked over 12½ hours.	Average daily number of hours for each year.	Number of days on which the mill worked over 12½ hours.	Average daily number of hours for each year.	Number of days on which the mill worked over 12½ hours.	Average daily number of hours for each year.
				H. M.		
1898 ...	Not available		106	12 8	This mill has been working for the last seven years only.	
1899 ...			204	12 55		
1900 ...			204	11 50		

Statement showing the hours worked.

Mr. Dwarkadass Dharamsey.

Year.	The Bombay Cotton Manufacturing Company, Limited.		The Lakhmidas Khimji S. W. and Company, Limited.		The Tricumdas Mills Company Limited.	
	Number of days on which the mill worked over 12½ hours.	Average daily number of hours for each year.	Number of days on which the mill worked over 12½ hours.	Average daily number of hours for each year.	Number of days on which the mill worked over 12½ hours.	Average daily number of hours for each year.
		H. M.				H. M.
1901 ...	181	12 55	170	12 25	144	12 18
1902 ...	195	12 48	275	13 20	133	12 18
1903 ...	278	13 15	297	13 50	148	12 22
1904 ...	292	13 41	289	13 40	146	12 31
1905 ...	216	13 11	232	13 40	241	13 28
1906 ...	268	13 2	291	13 15	282	13 10
1907* ...	242	12 56	228	13 8	238	13 18

* For the current year the figures are for the first 10 months only.

Note.—The witness did not attend for oral examination.

Witness No. 94.

Mr. Lalla' Written evidence.

Mr. P. V. Lalla, manager of the Tricumdas Mills Company, Limited.

The Tricumdas Mill, which is under my management, employs 918 men and 601 women, but no children. This mill has been working only for the last seven years, and the average daily number of working hours for—

1901 was 12—18′	On 144 days	the mill worked for more than 12½ hours.	
1902 „ 12—18′	„ 133	ditto	ditto ditto.
1903 „ 12—22′	„ 148	ditto	ditto ditto.
1904 „ 12—31′	„ 146	ditto	ditto ditto.
1905 „ 13—23′	„ 241	ditto	ditto ditto.
1906 „ 13—10′	„ 282	ditto	ditto ditto.
1907 „ 13—18′	„ 238	ditto	ditto ditto.

For the current year the figures are for the first 10 months only.

Long hours are decidedly advantageous to the mill, and in this mill at least no difference out of proportion is observable in production *per* spindle, or wastage, on account of the variation of the working hours from 12 to 14. I think certificates of physical fitness for employment should not be required, for in too many cases the opinions as to the fitness of particular persons for work will differ, and the matter will involve considerable hardship on the working class The system of age certificates, as at present worked, is, I believe, a fair one. I think an employé should be allowed to work for about 15 days pending examination for a certificate. About two visits every month by the certifying surgeon to a mill would suffice, or the taking of the examinees to the surgeon's office twice a month would be equally good The suggestion that no half-timer should be permitted to work as an adult, unless medically certified as physically fit for full-time work, is not feasible in practice; and no effectual remedy suggests itself to me to prevent a half timer who is refused a certificate as an adult in one factory from obtaining employment as an adult in another. I do not think there is any necessity to create a class of "young persons". And if such a class is created, and a special restriction put upon its working hours, it will entail a necessary curtailment of the working hours of adults, as the proportion of their labour is considerable in the economical working of the mill The number of persons of the age of 14—16 at this mill is between 250 and 300. It is a matter of small importance whence the factory inspectors are obtained so long as they are experienced and competent men. I do not consider training in England essential to an Indian factory inspector. I do not think it is desirable on the whole to frame any further stringent laws, and in the enforcement of the present or future factory laws I would suggest the advisability of letting off first defaulters with a warning only, unless the default be wilful and intentional. The suitable housing of factory hands is much to be desired, but any legislation in this connection, saddling the employers with additional expenditure, is likely to have a detrimental effect on the mill industry. The matter should be left to the discretion of each individual employer. So also the schooling of factory children is a matter that calls for the help of the Municipality or the Government rather than the employer, and schools in suitable centres would be more advantageous than separate schools for all factories. There is no necessity to fix time-limits for the working of mills. At present no mill works excessively long hours, and the work the hands do at present does not seem to affect their health injuriously. Shortening of hours would result in harm to the industry.

Note.—The witness did not attend for oral examination.

WITNESS NO. 95.

Mr. Mulraj Khatau, Bombay.

Mr. Mulraj Khatau. *Written evidence.*

I am a partner in the firm of Messrs, Khatau Makanji & Co., and I look after the management of the Bombay United Spinning and Weaving Company, Limited. In my opinion the physical deterioration that is sometimes witnessed in factory labourers is due chiefly to the fact that children are allowed to work in factories at a time when such an employment cannot but tell most injuriously upon their health and undermine their constitution for ever. Moreover, it must not be forgotten that it is just the time when they should be receiving education. For these reasons I do not favour the employment in factories of persons under the age of 14, and I think it desirable the legislation should be undertaken on this point. Certificates of physical fitness as well as of age should be required prior to the employment of such persons. I therefore consider it inadvisable to create a special class of workers intermediate between the half-timers and the adults, and corresponding to "young persons" under the English Act. If children are allowed to work in factories at all, it should be prescribed that they shall not be employed except in regular sets. I am strongly opposed to restricting the hours of male labour, as nowhere else outside India is it thought necessary to legislate on this matter, and also because Government does not deem it advisable to impose any restriction on labour employed outside factories. Any curtailment of the number of hours will have most harmful effects on the economical conditions of mill industry in this country, as factory labourers here are known by experience not to give a proportionately increasing production when mills work short time. The responsibility of providing elementary education for children working in factories should not be thrown on factory owners. In my opinion it is a matter which ought to be taken up by municipal bodies. Moreover, I know from experience that advantage is not taken of schools attached to factories. The fact that it is not deemed advisable to introduce compulsory education in this country explains why it is so. I do not feel myself competent to give opinions on questions of ventilation, sanitation, etc., which are best left to hygienic experts, but I believe that factory owners are always anxious to see that their labourers work under healthy conditions, so far as such conditions are possible in a factory. I do not approve of the suggestion to obtain inspectors from the United Kingdom for factory work in India. Indeed, I think it will be a mistake to do so, as such persons cannot possibly be familiar with the state of factory life in India. Neither is it advisable to demand that all factory inspectors should have received European training for their work. What is necessary is to get persons who are really competent for the work entrusted to them.

NOTE.—The witness did not attend for oral examination.

WITNESS NO. 96.

Mr. Shapurji B. Barucha, Bombay.

Mr. Shapurji B. Barucha. *Oral evidence*

Witness stated that he had had no experience of the actual working of mills, and his duties as agen had been chiefly of an administrative character. Both the Phœnix and Gold Mohur Mills commenced work at 5 15 A M, and one worked until 7 P M and the other to 7-30 P.M. Electric light was used, and he did not consider the long hours at all excessive. They could not compare English with Indian labourers, for the former worked systematically and the latter in a desultory manner. He considered that the Indian operative only put in 10 hours of work out of a 13 hours' day. To satisfy himself as to this, he issued passes for one-fifth of the number of men and boys in one department. The men threatened to strike if he persisted with the system, and he had to give it up. He was of opinion that the operatives would not improve their habits even if they had shorter hours. When witness worked his mill by daylight, the men themselves asked for longer hours with electric light in order that they might obtain higher wages They threatened to strike if their request was not complied with, and they now obtained overtime wages for the extra hour It was the opinion of his manager that the men worked more steadily with electric light The long hours did not injure the health of the men, and he himself worked long hours without being tired. While he was opposed to the legal restriction of adult working hours, he did not think that a uniform restriction of hours would hurt the industry. If the working hours of adult males were restricted, the men would attribute it to the interference of Lancashire The hands were all-powerful against the owners, and could combine, though they had not got a Trade Union. At present the men lacked a leader. Witness thought that the operatives had no defined opinion about the length of the working day. If they saw their friends working long hours and obtaining more money, then they wanted to do likewise. He was of opinion that the men would not like legislative interference with their hours of work, but would obey the law should a restriction be made. He also objected to the proposed young persons' class, and thought they could work more than 12 hours without injury to health. If such a class were created, it should apply to all India. He approved of the compulsory Sunday holiday, and would also give the Indian festivals. The days thus observed as holidays would not adversely affect the industry. He would not describe the mill operatives as drunkards. As a class they were sober and steady, but they become indebted through their social customs. Generally speaking they were healthy, strong and robust, and he did not think that as a class they had deteriorated in physique during the last 20 years He worked his flour mill by two shifts and the same men did not work in both The shifts worked for 12 hours and a muster roll was kept which prevented a day-shift man, if absent during the day, from working at night.

NOTE.—The witness was not asked to submit written evidence.

WITNESS NO. 97.

Mr J. H. Cooper, manager of the Rachael Sassoon Mill, Bombay.

Mr. J. H Cooper. *Oral evidence.*

The mill is a weaving mill of 2,000 looms. Witness had been 10 years in Bombay, and had previous experience at home. It was his opinion that the English weaver got more work out of each of his four looms than the Indian weaver did out of each of his two looms. The English

weaver obtained 10 *per cent.* more production out of each of his four looms as compared with the Indian's two, and that in a shorter working day. He estimated that the English weaver obtained 93 *per cent.* of the possible loom production, while in India it was 60 to 65 *per cent.* at the most. The difference in the percentage represented the time wasted by the Indian operative. His hands would not work beyond 12 hours, and he thought they idled two hours a day, consequently he only obtained 10 hours' work. He believed that long hours meant less efficiency. He preferred shorter hours with two intervals in the day. Even taking the hands as they worked at present, he considered that 12 hours should be the maximum working day. When witness first came to Bombay he considered that in a shed of 1,200 looms 25 *per cent.* of the hands were over 38 years of age. To-day he did not think the men over 30 numbered 5 *per cent.* The work had become more onerous and demanded greater attention. The elderly men had left the mills, and he could not account for their absence except that the work had become unpopular, for which long hours were responsible. The elderly men whom he noticed at his first mill were probably hand-loom men belonging to the weaver caste, chiefly Mahomedans. He had now a good percentage of Mahomedans who were smart in coloured-weaving. The jobbers generally brought the weavers, and he had heard of small sums being paid in the way of *dasturi*, but he had no knowledge of any sum as large as Rs. 5 being paid. There was a scarcity of labour, but he had no looms standing idle for want of hands. His mill employed no women as weavers, but there was no reason why they should not work in a weaving shed if it were properly ventilated. A shed with 1,000 looms would require 500 hands in India and only half that number in England. The air therefore became vitiated more quickly. Generally speaking the Indian sheds had more air space than those at home, but he had seen some in India where the air space was not so much. When one considered the greater number of hands in Indian sheds the question became one rather of atmosphere than of work. The bad atmosphere made the work very exhausting, and if a man only sat on a chair in the shed for the same number of hours he would be quite exhausted. He fully approved of a standard of purity of air. Latterly his mill had put in a humidifying and ventilating installation, and the atmosphere was much improved. There were two 36-inch diameter fans for each of the two sheds, and he estimated that even if all the windows and doors were closed, the air would be renewed in 2¾ hours. The old style of ridge ventilation was sufficient so far as ventilation was concerned, but was impracticable when humidifying was necessary. Witness thought that the operatives had improved in skill in the last years, but their habits were as bad as ever. He employed no half-timers, but took raw hands and taught them; consequently the young adult class would not affect him. The average pay of the weaver was Rs. 21. A few who were more attentive to their work earned Rs. 28. He found that the youths of from 15 to 18 were the hardest to handle, and they were very bad at loitering. The youths between the ages of 15 and 17 would form 25 *per cent.* of the total hands. Boys of 14 were not taken on as weavers, and between the ages of 14 and 16 he doubted whether he employed 50 out of a total of 1,700 hands. He believed that a vote of the hands of Bombay would be against working overtime, and he felt convinced that it was only the very few who went to the long-hour mills to add to their wages. He did not know of an instance where a man had left his mill for a long hour mill. In the long run restricted hours would be for the advantage of both masters and men. He had heard the men complain that the electric light spoiled their eyes.

Mr. Cooper.

NOTE.—The witness did not submit written evidence.

WITNESS No. 98.

Mr. W. H. Brady, of Messrs. Bradbury, Brady and Company, Bombay.

Witness stated that he had been connected with the mill industry in Bombay for 18 years, and had also had experience at home. He was interested in four mills—the Colaba Mill, the Jehangir Wadia Mill, the New City of Bombay Mill and the New Great Eastern Mill, which gave employment to 4,400 operatives. The average working day all the year round amounted to about 12 hours 40 minutes. He did not work the long hours of 1905, and it was not his experience that the hands preferred those mills where long hours were worked. When electric light was introduced in his mills, the men who were paid by the month received a 10 *per cent* increase in wages. In the long days they worked 13½ hours, and the men had never complained that this was too long. In his opinion boys took more time off than any other class. Recently he tried to introduce a pass-out system, which would have given each boy three and a quarter hours off each day. They objected on the ground that this was not enough, and finally they had to be allowed to go out once more as they liked. Witness considered that the adults would not take willingly to a 12 hour day. They would neither apply themselves more steadily, nor increase their earnings. They were not exhausted after the present day's work. Witness thought that the hours of the proposed "young persons" class would determine the working hours of the mill, and with the liberty which they at present had a 13 hours' day was not too much. Should the day be restricted to 12 hours it would involve much stricter supervision and more constant work, and under these conditions the men would be more tired than under the old 13 hours' day. Constant work would tire out the men, who would much prefer 13 hours' work with intervals of rest. His experience was that as a class mill operatives had improved in skill, but they were as inattentive as ever. Children used to be freely passed for mill work 10 years ago, but that was not the case now. Occasionally a child under age was certified as of age, but this was not general. Witness was of opinion that the 12-hour day would have no injurious effect on the industry, which would adapt itself gradually to the changed conditions. He employed very few half-timers—only 82 in the four mills—and he agreed with raising the minimum age to 10. At present some children at 9 were not up to half a day's work, and he thought they could get all that were required at the age of 10. Women could not be employed in large numbers because of their long intervals of rest, but if their hours were increased, there might be some departments in which they might be induced to work. They did not care to work alongside of the men, and they were not employed in the carding room in Bombay. Most of the women in these mills were *mahrattas*. Witness had never received any complaints against

Mr. Brady.
Oral evidence.

Mr. Brady.

the electric light. Fixing standard of purity of air in order to ensure proper ventilation was a subject which required very careful attention; and if this was duly kept in mind he had no objection. They could not, however, fix any standard of moisture for India. The water for humidifying purposes in his mills came from the Vehar main. He had fixed up a large number of humidifying plants, and in no instance did he know of one connected with the mill tank. In any event that should not be allowed. Witness had no objection to the doors opening outwards but considered that in the Bombay mills 9 out of every 10 were sliding doors, which were equally sound. He considered that one English operative was equal to three Indian operatives.

Witness had no wish to justify the long hours of 1905, but contended that the men pleased themselves in the matter. If they had not wished to work, then they could have struck, or gone to those mills which, working without electric light, were short-handed. The men had no organization covering Bombay as a whole, and in the absence of funds they could not carry on a large strike successfully. It was his opinion that the stricter supervision of a 12-hour day would tire the men more than the present hours. Personally he had no objection to a 12-hour day if the men wanted it If operatives had told members of the Commission that they were in favour of such a day, their answer to the question was probably dictated by the consideration that they wished to please the person asking. Witness considered that while working at night there were fewer absentees, and the workers had not that desire to loiter about outside. They were very cheerful while working by electric light. The absence of elderly people in the mills was probably accounted for by the fact that this class of people was short lived. Some mill hands retired to their country, but many who could save did not do so. The provision of a shed in which the operatives could take their meals was not appreciated. Witness had found that there was less waste when working by electric light.

NOTE.—The witness did not submit written evidence.

WITNESS No. 99.

Mr. Marsden.
Oral evidence.

Mr. T. Marsden, weaving master, Indian Mill, Bombay.

Witness stated that he had had 25 years' experience in England, and three years in India. There was no electric light in the mill. There were not many half-timers in the weaving shed, and the boys of from 14 to 17 years of age would be about 15 *per cent.* of the total staff. They earned from Rs. 10 to Rs. 16 or Rs 17 a month. Witness attributed the frequent going out to the compound to the foul air in the mill. They had to remember that in a weaving shed in India there were double the number of people that there would be in a shed of similar size in England, and there was no scientific ventilation. Leaving ventilation to depend solely on windows was very bad. In his opinion if the rooms were better ventilated, it would be to the advantage both of the employers and the employed. He had not been in any Bombay mills which had a scientific ventilation installation He received no complaints about the stuffy atmosphere, because the work people were used to it and were allowed to go out as much as they liked. Witness did not approve of the long hours by electric light, and thought the working day should be limited to 12 hours. He was working at present from 6 A.M. to 5 30 P M, and in the hot weather from light to dark. After their days work the men were exhausted. Their work was slacker towards the end of the day, and in his opinion the bulk of the waste was made in the late hours Witness thought that the conditions governing the creation of a class of "young persons" in India were very different from those at home. In England they could rely on a stable set of hands, and the young persons worked with their relatives, who exercised control over them. In India they changed hands at the rate of 20 *per* day, and the young persons would be without control. While he did not like restricting the adult's working day, yet he saw that unless it was limited by law, there was the possibility of employers getting hold of adults and working their mills for very long hours. Proprietors of mills would offer inducements to adults to work very long hours, and this was equally possible in both the spinning and weaving departments. In fact the mill could be run by giving extra frames to adults who would receive more pay. If a mill were spinning fine counts long hours could be worked, because not so many doffs would be required. Under the present conditions of spinning in India the working of the mill purely by adults was not possible. The hands were independent, and if they did not want to work they would not He had not had any strikes. Witness did not find that his hands left for those factories where long hours were worked. His mill was in a Mahomedan neighbourhood, and they kept more constantly to one mill than the Hindu workers. Some of the Mahomedan workers were as regular as hands at Home. He preferred the Mahomedan to the Mahratta for weaving. Witness did not think there was a large amount of drinking amongst mill hands. The Mahomedan operatives were more sturdy than the Hindus. Comparing the Indian worker with the Lancashire worker, class for class, he thought that the Indian hands were not as healthy as the English hands. This was because the Indian worker did not live under similar conditions. Operatives in England were more attentive to their duty, because they had shorter hours, and they could not expect the Indian worker to put as much zeal and energy into his work when he was employed for such long hours. If the hours were shortened, then he believed the Indian operative would improve, and there would be more continuous work than there is now. Probably 10 *per cent.* of the looms were stopped in the course of the day, that was to say, 76 out of 764 looms. The hands did not go out so much in the cold weather as in the hot weather, and they applied themselves better in the former, but it was impossible to compare the work done, as the cold weather was the worst time of the year to work in from a purely technical point of view. Witness had heard the same arguments advanced against a standard of purity of air in England as in India, but the ventilation standard was now accepted as a great advantage at home. A standard of purity of air would be much easier to arrive at in India than in England, but no standard of humidifying could be enforced in India. In the monsoon in Bombay, without any artificial humidity, the limit prescribed by the Act at home was exceeded.

NOTE.—The witness did not submit written evidence.

Witness No. 100.

Mr. Vasanji Khimji, proprietor of the Wallace Flour Mill, Bombay.

Witness stated that his mill worked day and night by two shifts, from 6 o'clock to 6 o'clock. Should a night-shift man be absent, then a day-shift man continued working, which made practically a working day of 24 hours for that individual man. He was, however, allowed three hours off to commence with. That was to say, he was free from 6 to 9 P.M., and in the course of the night he was allowed another two hours off. During the day-shift each man took from one to one and-a-half hours' rest, and in the night shift two hours' rest were allowed each man Consequently, if a man were compelled to work on with the night shift, he only worked an additional seven hours. The work in a flour mill was not so tedious as cotton mill work, and the men had merely to see that the machines were kept going regularly. In addition to the two hours off in the night shift, the men took other periods off for sleeping. The men arranged this among themselves. He had a watchman to supervise at night. During the last 18 months he had arranged that, when a night-shift man failed to appear, his place should be taken by a substitute, and not by a day-shift man. He employed two extra hands for this purpose, and as their names appeared on both rolls, it looked as though they had worked for 24 hours. But this was not so. Sunday was a holiday for all, except the engine room men, who were all at work cleaning and repairing from 6 A.M. to 6 P.M. on Sundays. No one worked at all from 6 P.M. Sunday to 6 A.M. Monday morning, during which time the mill was closed. The following diagram represented the working hours of the engine room staff:— Mr. Khimji. *Oral evidence.*

Shift.	Sunday.		Monday.		Tuesday.		Wednesday.		Thursday.		Friday.		Saturday.	
	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.
1st or day shift.	——		——		——	——			——		——		——	
2nd or night shift.	——			——			——	——		——		——		——

The shift working on Saturday night worked on till 6 P.M on Sunday (24 hours). They then had 24 hours off, and worked the Monday night shift, followed by the whole of Tuesday off, and another 24 hours' work on Wednesday. The day-shift worked the whole of Tuesday, and were free on Wednesday. The engine room hands worked 84 hours a week, as against 72 hours by the other hands. The engine room hands had never complained about this arrangement, and he did not think that the difficulty would be got over by employing extra hands for the Sunday work. The ordinary rate of pay was given for the 12 hours' work on Sunday. Ordinarily the mill required 152 men in all, but he employed two extra hands to fill any vacancies in the shifts. The men were quite healthy. It was necessary to employ the whole of the engine room staff on Sundays, as generally some repairing had to be done. If this arrangement were discontinued, it would mean stopping on another day, and he would not be able to fulfil his contracts. If the other flour mills in Bombay worked for 24 hours, then they probably had a similar system of shifts. The engine room men had their proper intervals off, but during the remainder of the time they had to attend to their duties.

Note.—The witness was not asked to prepare written evidence.

Witness No. 101.

Lieut.-Colonel K. H. Mistri, I.M.S., Civil Surgeon, Thana.

Witness stated that he examined the mill children at Coorla twice a year. He judged the children's ages by their height, general appearance, and development, and in any cases of doubt he looked at the teeth. Generally speaking, if a boy were from 56 to 58 inches in height he would pass him as over 14 years of age, and if from 47 to 48 inches, as over 9 years. If the lads were under those respective heights, and if they were fairly well matured, he would then examine their teeth. He would pass any doubtful cases, and he did not reject a great many. He had examined the children at the mill for six years, and during the last six months the mill authorities had complained that his standard was too exacting. It was alleged that children rejected by him had been passed in Bombay. He could not say what the Bombay standard was, but in his own case he occasionally knew the real age of the child, and he considered his standard very near the mark. Height alone would not be sufficient for the age test. There must be in addition the general appearance, degree of maturity, and, if necessary, dentition. Witness only received his travelling expenses when attending the mill. He did not consider that the health of mill operatives was bad, and comparing them as a class with labourers in outside employments he considered them a healthy lot. There was a big jail at Thana, and comparing its population with the mill operatives he considered them about the same in health and physique. The average weight of the jail population would be over 100 lb. The mill children looked healthy enough, and he had seen no cases of scrofula. For the age-test he would put height and development first, with dentition as a final criterion in the doubtful cases. Lieutenant Colonel Mistri. *Oral evidence.*

Note.—The witness was not asked to prepare written evidence.

Witness No. 102.

Mr. H. Gawthorne, manager of the Kohinur mill, Bombay.

Mr. Gawthorne. *Oral evidence.*

Witness stated that he had been manager of the mill since it was started in 1898. They had no electric light, and as the mill was rather isolated it had its own colony of hands. In October 1906 the rates of pay were increased 10 *per cent.* The ring boys went on strike, and forced his hand. That increase was now permanent. Witness preferred daylight working, and had heard many men complain that the electric light hurt their eyes. The Kohinur mill worked 13 hours in the longest days, and 11 hours in the short days, with an average day of 12 hours 6 minutes. Witness thought that if the working-day were limited to 12 hours the attendance would be better and more regular. A daylight to dark day, with the prohibition of electric light, would prevent any evasions of the law, and he thought that with a fixed 12-hour day, with electric light, mills might try to cut time in the early morning. He would allow those mills which had electric light to work a fixed 12 or 12½-hour day, and those which had no electric light to work from sunrise to sunset. He would like to see all the Bombay mills working an uniform day. Witness did not think that the long days in the hot weather were exhausting to the natives, who were much more healthy then than in the cold weather. By working the average 12-hour day in 1905 they held their own with the other mills, and their profits were just as large. The production improved in the hot weather on account of the greater moisture in the air. He relied upon open windows for ventilation. Witness estimated that the younger adults idled about for three hours during the day, including the interval. He had three boys shadowed on one occasion, and they each wasted three hours. The boys had no suspicion of what was being done, and he considered the three hours a fair average of the time wasted by the young adults. The hands in the mule room took two hours off, including the interval, but the time wasted in the preparation room was very small. It would not pay to place water taps in the mills. He considered that each hand would have to go out four times a day for legitimate purposes, at an average of 15 minutes each time. He employed 30 *per cent.* more hands to cover this waste of time, and keep the machines going The ring boys went out so much because they were irresponsible children, and another reason, and perhaps the primary one, was because they received fixed monthly wages. They earned about Rs. 11 The women were only employed in the reeling room. He was convinced that labour was not available in Bombay for two shifts, and if that system was introduced there would be the old abuse of a man working in one mill during the day and in another mill at night. A man could put in 16 hours, eight in one mill and eight in another. He disapproved of schools for half-timers, and considered the educated mill hand a failure.

Note.—Witness did not submit written evidence.

Witness No. 103.

Mr. G. W. Hatch, I.C.S., Collector of Bombay.

Mr. Hatch. *Written evidence.*

Personally I am not in favour of limiting the working hours of adults—if by adults are meant persons of full age, *i. e.*, persons who are their own masters in the eyes of the law. However, I know of no practical objection to the limitation of the working hours of labourers of full age. I am not aware of any evidence showing that the physique of workers has been affected by long hours. If the same limit of hours is to be fixed for all labourers over 14 years of age I would fix it at 12. I would prescribe as legal working hours either 5-30 A. M. to 6 P. M., or 6 A. M to 6-30 P. M. as might best suit local circumstances. The half-hour stoppage might, I think, be definitely fixed by law. If this is shown to be impracticable I would suggest that the stoppage be fixed between noon and 1 P. M. This would assist inspectors to detect evasion. I have no evidence of physical deterioration as the result of children under 14 being worked as adults. The confinement of children of this age for 13 or 14 hours a day in the atmosphere of a cotton mill appears in itself to be an undesirable thing If no class of "young persons" is created, I think a special register of all workers under 16 would be of considerable advantage, both to the certifying surgeon and the inspectors. I am of opinion that the employment of women at night should be prohibited. I would raise the minimum age at which children are allowed to work in factories to 10. Certificates of both age and physical fitness should be required before children are allowed to work in factories. Similarly certificates of both age and physical fitness should be required before half-timers are allowed to word as adults. It should be prescribed by law that children shall only be employed in regular sets, and that the set in which every child is employed should be shown against his name in the mill muster-roll. A copy of the muster-roll recently prescribed by the Bombay Government is attached. I am not in favour of compelling factory owners to provide elementary education at their own expense for children working in their factories. The existence of bogus schools maintained in order that children might be kept on the premises and worked over legal hours has been reported more than once by the inspectors. I would make a rule prohibiting non-working children from accompanying workers to any parts of a factory where there is machinery in motion. All children found in such places should be assumed to be at work, and the owner or manager of the factory would then be liable to prosecution in the case of any such child who was under the minimum age. While the Factory Act must be uniform for the whole of India, I consider that the rules made thereunder and the arrangements for inspection should be under the control of the Local Government. Knowledge of local conditions is essential if the Act is to be administered without friction. I am of opinion that there should be a full-time medical inspector of factories. If the certification of children is left in the hands of the Presidency and Civil Surgeons, then one full-time medical inspector with head-quarters at Bombay would suffice for the Presidency.

The present special factory establishment consists of—

(1) The Presidency Inspector—pay Rs. 450—30—600.
(2) The First Inspector (Bombay)—pay Rs. 400—20—500.
(3) The Second Inspector (Ahmedabad)—pay Rs. 300—20—400.

Mr. Hatch.

The assistant to the Collector of Bombay is appointed "Chief Inspector" for Bombay City; elsewhere the District Magistrates are "Chief Inspectors" under the Act. The Collector of Bombay is the medium of communication between Government and the Factory Department. In the *mofussil* Assistant and Deputy Collectors of certain districts are notified as local inspectors of the factories within their charge. Medical inspection of factories is made twice a year in Bombay by one of the Presidency Surgeons, up-country by the Civil Surgeon of the district. The establishment is recruited locally. Men with a knowledge of factory work are obtained. The present First Inspector was manager of a mill. The present Presidency Inspector received some technical training in Europe. The late Presidency Inspector (Mr. Hartley), though he had no technical training, was conspicuously successful. His knowledge of mills was obtained as an assistant and up-country agent of an important firm of cotton dealers. I doubt the desirability of attempting to recruit from England. Men with a knowledge of the country and of the language are wanted. Such training as newly appointed men require in the application of the Act they can easily pick up from the senior inspectors.

The present establishment is not adequate. Government have been asked to strengthen it by the appointment of an additional inspector. If a head of the department is appointed who will devote his whole time to factories one inspector in addition to the present establishment of three will suffice. A re-arrangement of the establishment is being proposed which it is thought will result in a considerable increase in efficiency and economy of labour. It is proposed to abolish the Presidency Inspector who spends the greater part of his time in travelling. Two inspectors, a senior and a junior, will be located at Ahmedabad. They will work Gujrat *(a)*, Khandesh (*b*), and Sind *(c)*. Two others, a senior and a junior, will be stationed in Bombay. One of these will tour through the Deccan and Southern Maratha country two or three times in the year. Only 18 major factories and some 45 seasonal factories have to be inspected in the Deccan and Southern Maratha country; so that for eight or nine months in the year the services of an additional inspector will be available for Bombay City*. I am not in favour of the centralization of the department outside the Presidency. Our inspectors must have a working knowledge of the languages of the Presidency to carry out their duties properly. Moreover I believe the Act will be administered more satisfactorily if the inspectors are appointed and controlled by the local administration than if they are controlled by a Government of India Department. I should like to see a whole-time medical inspector appointed for the Presidency with head-quarters at Bombay. I believe such an officer would have time to do the certifying work for Bombay City. Elsewhere the certifying work might be left with the Civil Surgeons. I would abolish the medical inspections of factories by Civil Surgeons. The medical inspection of seasonal factories is, in my opinion, unnecessary. The major factories in the Presidency could be visited once in the year by the medical inspector from Bombay. A statement embodying the ideas of the Bombay Factory Department on the amendments required in the existing law is being prepared and will be submitted to the Commission.

(a)	53 major and *nil*	seasonal.
(b)	3 major and 175	do.
(c)	11 major and 32	do.
	66	207

*156 factories.

There are 249 seasonal factories (cotton presses and cotton gins) in the Presidency which are listed as coming under the Act. There are some 50 others, mostly found in Gujrat, which are not under the Act. The season for ginning and pressing lasts from November to April, sometimes into May. But few of these seasonal factories actually work more than three months (or 90 days) in one season. Consequently prosecutions for evasion of the law are seldom attempted, the four months' minimum provided by section 2 of the Act affording the owners a loophole they are not slow to avail themselves of. The amendment of the Act by the omission of the words "for not less than four months in the year" in section 2 has been recommended to the Government of India by the Local Government. With the Act so amended it will be possible to prosecute the owners of seasonal factories for evasions of the law. I would enforce against them the provisions of the Act relating to (1) illegal employment of children, (2) unfenced machinery, and (3) provision of latrines in the case of factories situated within the limits of a town or village; to attempt to enforce the remaining provisions of the Act I consider impracticable and unnecessary. These seasonal factories work for a week or two at a time, and then lie idle. Muster-rolls are kept irregularly, or not kept at all. The factories are not centred in a few large towns, but are dotted over the whole country-side. The risk of a visit from an inspector is so remote that the possibility of a conviction would never deter the manager from working overtime when cotton was waiting to be ginned. The cotton comes in with a rush and the state of the market frequently requires that it should be ginned at once. In the busy season it is a practical certainty that the time-limits imposed by the Act would be ignored. I consider it very undesirable that the Factory Act should lay down limits that the inspectors will be unable to enforce. But the main argument against the application of the major portion of the Act to these seasonal factories is to be found in the fact that the labour employed therein is not *factory labour*. The workers are generally agriculturists, tempted into the cotton gin for a few weeks by the offer of good wages. They do not require protection against their employers, or against themselves, in the way that the factory hand does.

FORM A2.

_____Factory.

Daily Muster Roll of Children under section 9.

Hours of work and intervals of rest allowed to the children:—

A (or first) Set work from_____until_____. A Set rest from_____until_____.

B (or second) Set work from_____until_____. B Set rest from_____until_____.

*Occupier's signature*_____.

Note.—The particulars relating to Set A should be written up not later than 8 A.M., and the particulars relating to Set B should be written up not later than 3 P.M., each day.

Factory number.	Certificate number as shown in Form A1.	Name	Set in which the child works.					Year, month and date.																									Number of days employed.	Rate of wages.	Wages due.	Deductions (fines for failure).	Net amount to be paid.
1	2	3	4	5	6	7	8	9																									10	11	12	13	14
								1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			Rs. a. p.	Rs. a. p.	Rs. a. p.

[NOTE.—Columns 4 to 8 are provided to allow for the child being changed from one set to another.]

Witness stated that he had been for 15 months in charge of the factory inspection department in Bombay, and eight years ago he had experience of inspection work when Assistant Collector of East Khandesh. Witness came to Bombay in 1906, and in May of that year he was asked by the Local Government to report on the conditions of labour then existing in the Bombay cotton mills. He visited a number of mills. The only real abuse he noticed was the number of children, passed as adults, who were working full-time. At that time the long hours had practically stopped, although there might have been one or two mills working the 14-hour day. In consequence of what he saw witness proposed the creation of a "young persons" class, and placed the age at 13 years, the age at which an Indian child became of age. He was in favour of creating a "young persons" class but was not an expert on the matter, and so could not say whether it would work in practice. Before reporting to Government he obtained the opinion of some leading mill-owners on the proposal. Mr Leslie was against it, but all the others consulted thought it would have the effect desired, and check the evil of the excessive working of children. He understood from the local inspector that the mills at Ahmedabad were at that time working long hours. He could not express any opinion concerning the deterioration in health of the operatives, or otherwise. In the course of his inspection he was not struck by any appearance of bad physique. For the "young persons" class he considered a 12 hours day enough, excluding the interval. He approved of raising the minimum age of children to 10. This was merely a matter of opinion, but he thought it better that they should start work at the age of 10 than at 9. Witness went round the mills with a medical man, who insisted on the difficulty of ascertaining correctly a child's age. A great many of the children appeared small for 9 years. If no "young persons" class was formed a register of "young persons" would be desirable, as it would greatly facilitate the work of inspection. This register might be kept until the children reached 16 years of age. When witness was making his inspection he found two or three cases of children whom the doctor had not passed working and receiving pay as adults. The prosecutions in these cases were successful. It was after this that witness made his recommendations about identification marks. There had been cases of conflict of medical opinion in respect to age, but none had happened in his experience, and he could not say whether a prosecution had ever failed through this conflict of medical evidence. He approved of the certifying surgeon's opinion as to age being final. He saw no objection to women being allowed to work for 12 hours He found that occasionally young children of from 6 to 9 years entered the mill with their parents, and were put to work. This ought to be prevented. Most women worked in the reeling room, where there was no machinery in motion, and so, according to the suggestion in his written evidence, children-in arms would not be affected. Witness believed that a good many provisions that were now rules might now come into the Act. At present the inspectors interpreted the rules differently. While leaving the administration to the Provincial Government, he thought it might be possible to include in the Act, or in general rules for the whole of India, more detailed instructions for inspectors. His impression was that the duties at present done by the medical officer could be equally well done by the factory inspector, but if a medical man had the practical knowledge of what was required there was no reason why the medical man should not carry out the two duties He saw no objection to one man doing the certifying for the Island of Bombay; one officer would not be sufficient for the whole of the Presidency. The post of chief inspector in Bombay changed on the average once a year; he was generally a junior officer. It was really a misnomer to call him chief inspector, as he was practically the Collector's deputy for factory administration There would probably be sufficient work in the Bombay Presidency for the head of a department. The chief inspector did the inspection of one-third of the factories in Bombay City, and the first inspector did the balance, and the whole of the excise work. Witness considered that the first inspector at present was overworked, and required assistance, and should there be any extension of work he must have an increase of staff. Witness thought that it would undoubtedly lead to greater efficiency in the department if they had an inspector-general at the head who could decide about prosecutions and general questions. He would not object to the Collector of Bombay going out of the concern entirely and he thought that the inspector-general of factories could be made responsible for the collection of the excise revenue. The work of the Collector in regard to the collection of this revenue was formal. He imagined that the inspectors could do both inspecting and excise work at the same time; outside Bombay and Ahmedabad there were very few factories which paid excise. If one man looked after both works it would mean a great saving of power and time. He thought that the new men could be recruited in India if good enough pay was offered. Proposals for an increase in the pay of the present inspecting staff had already gone to the Local Government. It was his opinion that a medical man could do the ordinary duties of the inspector, but whether he would find the duties congenial was another matter. Government had sanctioned the fees of a medical officer at Rs. 10 *per* visit to each mill and so much *per* child examined. He disapproved of this entirely. He did not like the children or the mill owners having to pay, and thought that Government ought to pay the whole of the fees. He approved of all direct payments from the mills being done away with. One Presidency medical certifying officer had received as much as Rs. 1,500 *per* month in inspection fees apart from the fees *per* child, while his grade pay (witness believed) was only Rs. 1,200. Witness approved of a certificate of physical fitness and age being required both before working as a child and as an adult.

Mr. Hatch. *Oral evidence.*

Witness was at Ratnagiri for two and-a-half years, but did not make any particular enquiries there concerning the labour question. It was well known that the people of Ratnagiri received large remittances from Bombay. He never heard any suggestion that the people returning from mill employment were poorer in health than the remainder of the population. Ratnagiri was a very healthy district; there was no plague there and very little malaria. He considered that the second physical fitness test would prevent the passing of unfit children into the adult stage, and the proportion affected would be very small

He imagined that the mill-owner would be justified in employing a 15-year old child without any certificate and if the inspector found a doubtful case he could call in the surgeon. He believed that the agricultural labourer received 3 annas a day for an ordinary day's work. Gins and presses worked long hours for short periods in the year and he did not think it necessary to extend the protection of the Act to their labour. He would apply the Act to gins and presses in

Mr. Hatch. respect of the fencing of machinery. If they left optional certain of the provisions regarding time he saw no objection to bringing under the Act all places using steam-power.

Evidence of Mill Operatives.

Oral evidence of mill operatives. The President, with three members of the Commission, visited some of the *chawls* of the mill-workers in the Parel district of Bombay on Sunday, the 24th November 1907. At two places the mill-workers were collected and questioned. They were then asked to put forward one of their number as spokesman at each place, and their statements were then recorded on the spot as follows:—

Statement of Ganu Sonu, maratha, age 25 years, mill jobber in the Standard Mill, Bombay:—

I am put forward as spokesman for the 50 mill-hands assembled here. We all desire that Government should interfere to restrict the hours of work in mills. The mill I am employed in has worked from about 5-45 A.M. to 7-30 P.M., for several years. We find these long hours exhausting. We go to our work in the dark, and come away at night in the dark, and have no time for relaxation. After getting leave at night we have to bathe and eat our supper, we get to bed about 10 P.M. and rise in the morning about 4-30 A.M. As a rule we eat nothing before going to the mill in the morning, but those that can afford it have a cup of tea (costing ¼ anna) at the mill about 7 A.M. Then our principal meal is brought to the mill about 9 or 10 A.M., and we eat it there. We generally smoke during the midday interval, and eat anything that may be over from the morning meal, and then we have our supper at home at night. An adult mill-hand boarding with another family pays Rs. 6 a month for these meals, and a youth Rs. 5 a month. We all wish to go back to the old system of working only about 12 hours a day. We are unable to secure this without Government intervention, because we have no means of combining all over Bombay, and if the workers of any one mill refuse to work long hours others are brought in. At present the long hours tire us out and so we take three or four days "off" (besides Sundays) every month. We wish for a 12-hour day, even though that will reduce our earnings on piece-work.

NOTE.—After recording this statement the Commission inspected the adjacent *chawl* called 'Agbet *chawl*' and taking what seemed to be a fairly typical case, found an adult mill hand named Babu Vani, with his wife, his cousin and two adult boarders living in a room 10 ft. × 10 ft. × 9 ft. high, the rent of which was Rs. 2 a month.

Statement of Bhiva Bhawaji, age 40 years, maratha, jobber in the Sun Mill:—

I have been working in the Bombay mills for 25 years, and am now a jobber. The hundred mill-hands assembled here have put me forward as their spokesman. At present the Sun Mill works only from 6 A.M. to 6-30 P.M. during the winter, but in 1905 it used to work from 5-30 A.M. to 8 P.M. We got a little more pay then, it is true, and so we worked, but none of us now want to go back to night work, and we all wish Government to interfere to prevent the possibility of long hours. Some of us wish a 6 A.M. to 6 P.M. day fixed absolutely all the year round, because if there is any variation from day to day the manager will take advantage of it and gradually increase the hours: others of us wish for daylight working only, that is about 11 hours in winter and 13 in summer, varying with the length of daylight. This was the practice before electric light was introduced, and some of us wish to revert to it so as to escape work by electric light altogether. We all wish for restriction of some sort, even though it entails reduction of our piece-work earnings. We were quite contented before the long hours were introduced. The long hours exhausted us, and many fell ill, and others complained that the electric light hurt their eyes. We could bear it only because we take on an average three days "off" (excluding Sundays) in a month. This gives us time to recover, if we are out of sorts or tired. Very few of the Bombay mill operatives are permanently settled down in Bombay: almost all of us have our homes in Ratnagiri district and the Konkan, and we go there once every year or two for a short visit. When a man is too old to work he does not return to Bombay, but passes his old age at home, being helped by remittances sent from Bombay by working members of his family. Our children are as a rule all born in Ratnagiri district, not in Bombay.

Oral evidence of mill operatives. On Sunday, the 1st December, the President, with the Hon'ble Mr. Vithaldas and Mr. Chitnavis, visited the *chawls* of mill operatives in three places in the Chinchpogli quarter of Bombay City—

(1) Shioram Bhans *chawl* at Kala Choki road, where about 100 operatives from Great Eastern, Alexandra, Bombay Cotton, Standard, Lord Reay, and Goculdas Morarji mills were questioned;

(2) Bhawan *chawl* at Chinchpogli road, where about 100 operatives from the E. D. Sassoon and Soparibag mills were questioned; and

(3) Kalachoki cross road, where about 50 operatives from the Alexandra, Great Eastern, Jacob Sassoon, and Lakhimdas Khimji mills were questioned.

The men objected to give their names, as they said they would be marked down by the mill managers and dismissed; but they were unanimous at each place in expressing the following views:—

We wish for legislation to restrict the hours of work in mills to 12 hours in both summer and winter. The long hours we work at present are exhausting, and we have to take frequent days "off". We understand that the shorter hours will mean less earnings by piece-work, unless we work harder, but we are prepared for that. We admit that some hands go by preference to mills where longer hours are worked, but they are only a few of us and they go because they see others earning more wages there. But the general wish of all the operatives is for a fixed day of 12 hours. We cannot secure that without the help of Government, because we have no means of combining all over Bombay, though men of particular mills sometimes go out on strike.

G. C. B. P., Simla.—No. 1 F. L. C.—20-4-08.—1,700.—C. P.

JALGAON.

Witness No. 104.

Mr. Hormusji Framji Udvadia, manager of the Khandesh Spinning and Weaving Mills Company, Limited, and the New East India Press Company, Limited, Jalgaon.

Mr. Hormusji Framji Udvadia. *Written evidence.*

I represent the Khandesh Spinning and Weaving Mills Company, Limited. The numbers of men, women and children working in the factory are 987, 185 and 140, respectively. This factory has worked for about 110 days in each year, during the last ten years, for over 12½ hours a day, and the average daily number of hours has been about 11 hours 57 minutes. The existing practice as regards the medical examination of children on half-time is objectionable. The system at present prevalent of Civil Surgeons and Assistant Civil Surgeons giving certificates is, in my opinion, very irregular, although the factory owners and the agents try their best to ascertain that the boys employed in their factories are of good physical strength. The creation of a new class of "young persons" is not desirable in India. The most suitable time for mills to commence and to close is sunrise and sunset. I do not approve of the suggestion that inspectors from the United Kingdom should be obtained for factory work in India. I don't think it necessary that all factory inspectors should, in future, receive a considerable portion of their training in England. Men far more competent and more experienced in factory work can easily be obtained in India, as they are fully acquainted with the condition of the people, both social and moral. I also represent the New East India Press Company, Limited; the numbers of men and women working in it are 66 and 7, respectively. We do not employ children in the factory. I cannot give the exact dates of commencing and closing the factory, as it works only 90 days in the whole year. We have fixed the working hours of our factory from sunrise to sunset. Our factory works sometimes four hours, six hours or eight hours in a day; it generally depends upon the quantity of cotton on hand. The average working hours will come to less than 12 hours. We do not approve of the proposal to bring ginning mills and cotton presses under Factory Act. They work for a short period, and the whole work must be finished in a limited time as these factories cannot work in the monsoon. Both the sexes should be employed in them, so that they can earn enough in this limited time to last for the whole year. Women should not be prohibited from working during the night: they very seldom work at night. The openers do not run in ginning factories—only in presses. Appliances to extinguish fires are always ready at hand. No fatal accident has ocurred in our factory, and therefore we are of opinion that it is not necessary to bring ginning mills and cotton presses under the Factory Act.

Oral evidence.

Witness stated that he had been twenty years in the industry. The mill was only worked by daylight, and he considered from sunrise to sunset the proper working day. Even in the long days in the hot whether the operatives only put in ten hours of actual work. Labour was plentiful in Khandesh, and he only employed 8 *per cent.* extra hands to relieve those who wanted to go out into the compound. Witness thought that they should be allowed to employ children before being passed by the doctor, in order to see whether they were up to the work. The question of age should be left to the mill-owner and manager, in consultation with the doctor. At present the certifying surgeon passed the children, and then the Civil Surgeon would visit the mill and say that some of the ages were doubtful. He sent children to the doctor, perhaps once in two months. Witness also worked his press by daylight. He had never had an accident through hands working in front of the opener. He had had a fire or two, but nobody had ever been burnt He did not allow women to work in front of the opener, and would approve of women being prohibited from so doing. There was some hardship owing to the press being brought under the Act, and there would be some advantage if the press were exempted from its operation. He did not think that there should be any restrictions in regard to labour, as the work was not continuous. Witness never worked his press at night. With a fixed twelve-hour day there would be less production, and the Company would have to instal electric light. The operatives themselves would not be content with a twelve hours' day. The hands could easily work for thirteen hours and over, as their duties were not heavy. The children were given work according to their age, and he saw that their duties were not too heavy. One hundred and fifty of the mill hands had been with him for twenty years. There was not so much drinking as in Bombay, and, as living was cheap, he thought they saved a little money. About 25 *per cent.* might drink on holidays. The Bombay child might appear to be better developed than his half-timers, but in reality his children were the stronger of the two. In Khandesh the children eat *bajra*, and in Bombay they live on rice. His half-timers received Rs. 3 a month. Witness thought that there would be great disorganization if the mill work of the young adults were limited to twelve hours' work, and he saw no reason for any change in the present arrangements. He had no school, but, as child labour was plentiful there was no inducement to the jobber to break the law. *Chawls* were not provided, but the hands were allowed to build huts on the mill land. About sixty families had availed themselves of this permission.

Witness No. 105.

Mr. R. D. Bell, I.C.S., Assistant Collector, East Khandesh.

Mr R. D. Bell. *Written evidence.*

My experience of factories is confined to the East Khandesh District, the Eastern Division of which has been in my charge since February 1905. This is my fourth touring season in the charge. The only two large factories are the railway workshops at Bhusaval and the Khandesh

Mr. R. D. Bell.

Spinning and Weaving Mills at Jalgaon. In addition, there are 34 gins and 11 presses at work during the cotton season and it is to these that I specially confine my evidence. I approve of the proposal to bring under the Factory Act ginning mills and presses, irrespective of the number of months they work in a year. My main reason is that it is necessary to secure adequate fencing of machinery. The gins and presses here are always inspected by the Presidency and local inspectors, and orders and instructions given are generally carried out. But without these orders and instructions I find that gin owners do not make adequate fencing provision as a rule Another point in which it seems desirable to have definite control is in the case of gins and presses working night and day. In this case a second engineer with some sort of qualification should be engaged. As it is, these factories frequently work 24 hours a day with a single engineer. Assuming that it is decided to make the Factory Act applicable to all gins and presses, I think that special provisions, modifying the general law, would be necessary in the case of gins and presses. These are not to be compared in any way with Bombay factories, with their labyrinths of machinery. In the first place they are only seasonal factories, seldom working for more than 4 or 5 months in the year; and in the second place the work is of a very simple character. In these circumstances I think that women should certainly be allowed to work 12 hours a day, excluding the mid-day stoppage. They should also be allowed to work at night. Four or five months of gin work will not hurt a woman under these conditions. Night work, moreover, is sometimes very necessary as gins and presses must make the most of their very short season. These would be really valuable concessions to gin owners. As for a general limitation of working hours, it is not very easy to make recommendations. What one is inclined to think is necessary in the interests of the workers may not really be so, and it is very difficult to ascertain point of view of the workers themselves, if, indeed, they have one. Generally speaking, however, I think that the following are safe recommendations. In the case of both gins and presses I recommend the half-hour stoppage and the limitation of the employment of women to 12 hours a day, excluding this stoppage. Gins generally work three kinds of time: (1) 12 hours a day, (2) *sawai* or 17 hours a day, including mid-day stoppage, (3) 24 hours a day. The workers on the gins are generally women, and men do sundry jobs. When *sawai* is worked there are two gangs of women, and the men are not organized in any particular way. Under present conditions it is hardly necessary to limit the hours of the men, but, as exceptions give rise to exceptions, I do not think that there would be any hardship if the men in gins were restricted to 12 hours a day, if it were decided to make this restriction in other factories. These are the hours which they generally work at present. Presses generally work either 12 or 24 hours a day. The work is fairly arduous, and the atmosphere frequently bad. I think that men in presses should be restricted to 12 hours a day, if this restriction be applied to other factories. If hours are to be limited, gins and presses should be worked by means of sanctioned time-tables. At present, gin and press-owners submit their time-tables to me for approval, and I consider that this is sufficient check. Children are never employed in the local gins and presses—at least they are not supposed to be—so I have little practical experience of their employment. I think that the present restrictions in the case of their employment are sufficient for gins and presses. The owners should certainly not be required to provide education for them. There should, however, be a rule prohibiting all non-working children from accompanying workers to *any* part of a gin or press. There is no need for a class of "young persons." There is no need to have elaborate regulations for the ventilation and sanitation of gins and presses. There is no need to prescribe a standard of moisture for the air in gins and presses. No standard of purity need be fixed for the water used for humidifying purposes. Latrine accommodation is, at present, sufficient, but separate urinal accommodation might be insisted on. So far as ventilation, sanitation and medical inspection go, I would even recommend—and recommend strongly—that the present medical inspection be dispensed with, and that the saving thus made be spent on paying for more inspection by full-time Presidency inspectors. The sanitary and ventilating arrangements of gins and presses are simple enough, and do not require a trained medical man for supervision. Orders are generally limited to the cleaning of the latrines, white-washing of the factory, or the raising of a few sheets in the roof for ventilation purposes. I cannot recollect an order passed by a Civil Surgeon which could not have been passed with equal authority by any other inspector and which would not have been passed by the latter under proper circumstances. On the other hand, several factories in the outlying villages in my charge have not yet been visited by the Presidency factory inspectors, and only those on or near the railway line have hitherto been visited with any regularity. It is much more necessary to have regular visits from a Presidency inspector qualified to give orders about fencing of machinery than it is to have visits from a Civil Surgeon who is not likely to give orders that would not have been given by the Presidency or local inspectors. I may add that the Civil Surgeon also seldom visits outlying factories. In this locality the line shaft in all gins, so far as I know, is now fenced, and I see no objection to prescribing that it should be cased in between the drums in all cases. One small matter remains to be noticed. All gins and presses maintain a visit book in which inspectors record their orders. This is not prescribed by law, and there is nothing to prevent a gin manager removing a page in which are remarks which may serve as a guide or warning to future inspectors. I have actually known this done. The book is a very useful one. An inspector can see exactly what has been done in the past, and local inspectors, like myself, can see at a glance what are the latest orders of the Presidency inspector, and then inspect with a view to see whether they have been carried out. The maintenance of the book should therefore be enforced by law, or by rules under the law, and tampering with it should be made punishable.

Oral evidence.

Witness stated that the gins and presses in the district were inspected as though they came under the Act. The proprietors agreed to all orders, even though such orders might not be strictly legal. They did not object, but he did know whether they approved. He had inspected gins, working with women at night. There was no order to prevent gins from working after eight o'clock, but if the day were longer then twelve hours then they worked in shifts, according to a time-table. There were more gins and presses in East Khandesh than were necesary for the cotton crop there, and so there was no great necessity to work at night. The workers frequently came from Sholapur and other Deccan districts, the labour being supplied by contract. He did no

consider them a drunken class. Witness did not think it absolutely necessary that women should be restricted to twelve hours' work. He thought they could look after themselves, and in the gins and presses they had a system of reliefs. In his opinion the time-tables were not observed. Non-working children should be prohibited from entering factories, but children in arms might be allowed with their mothers. Witness considered that one in fifty latrine accommodation was sufficient. In East Khandesh the hands generally made use of the fields. He did not object to the Civil Surgeon inspecting the gins and presses, but considered that the fees for those inspections might be better employed in the provision of another inspector. Witness did not approve of the appointment of a whole-time medical officer for inspecting purposes, as the arrangements in gins and presses were so simple that a trained medical man was not required. At present the Presidency inspector, Collector, Assistant Collector, and *mamlatdar* all did inspecting work, and he had to see that the Inspector's recommendations were carried out. The Presidency inspector wrote his orders in a book, and also reported to the Collector. Witness had no experience of gins and presses, except in East Khándesh. Mr. R. D. Bell.

WITNESS No. 106.

Mr. F. G. McCormack, Presidency Inspector of Factories.

Witness stated that his duties lay outside the Island of Bombay and Ahmedabad. He received his technical training in Germany, and after 7 years' service in the department he went home for 6 months to study labour conditions at the factories there, and the humidifying and ventilating systems in vogue. He had had twelve years' experience, ten and a half of which were spent in Ahmedabad. The gins in Gujarát were not under the Act, but those in Khándesh were. The Khándesh gins were brought under the Act when there were fewer factories, and they had never, with a few exceptions, tried to be exempted He considered that the application of the Act had led to a great improvement in the working of the Khándesh gins, as compared with those in other parts of the Presidency. He was not in favour of any restriction on male adult labour in gins and presses, but would limit women to eleven hours' work. He thought there was sufficient labour available for two shifts, but could not say that that would be so in Gujarát. In Khándesh they had one extra woman for every two gins. For 40 gins there would be 60 women. He did not think that the time-tables were worked up to. The line shaft was protected in the 200 gins that he had to inspect, and there had been no accidents in that connection. He knew of no accidents happening through the ginning opener. Last year eight women were burnt to death through working in front of a press opener in Mahomed Ali Esufbhoy's factory at Amalner. He did not approve of a prohibition against women working in front of the opener. He thought it would be practicable to have a protecting wall, and the women could work on the other side of this wall. Women were employed, as well as men, to get the cotton still cleaner by tossing and mixing it. This year twenty-three new gins started in Khándesh, owing to the system of pooling of profits in existence there. The Hubli gins had no openers, and did not work at night, as a rule. The Hubli gins were also under the Act, and were run similarly to the Khándesh gins. One of the Hubli gins was owned by an European. The gins in Khándesh and Hubli were not allowed to start work until their time-tables had been approved by the Collector, and the proprietors had never objected to this. He thought that the question of latrine accommodation should be left largely to the discretion of the inspector. Latrines were very seldom used, the operatives preferring the fields, where possible. Up-country it was difficult to get sweepers to clean them. A good latrine seat was expensive, and he estimated that five or six seats would cost Rs. 500. Witness would restrict the hours of female labour, because women required protection. There were ten cotton mills in his district, one in Khándesh, two at Hubli, three at Sholápur, one at Guddak, and three in Poona. Three Sholápur mills and one Poona mill worked long hours by electric light. He thought that mills should be restricted to daylight working, as longer hours than that would injuriously affect the physique of the worker. He thought that standard plans of gins and press houses should be laid down by Government for the guidance of proprietors. This would save the necessity of alterations after the building was erected, and it would be a help to the factory owner. Where possible, all press houses should be built on the ground floor. The old style building had an upper storey, and there was less chance of escape in case of fire. If there were an upper storey it should have a gallery erected all round, and connected with the different passages. He saw no reason why plans of gins and presses should not be submitted to the factory department for approval. The press opener should be in a room by itself, and should be fitted with a fire extinguishing arrangement. The half-hour mid-day rest should be fixed by law. Some mills now worked continuously, and the law was evaded. Children should not be allowed to work more than three hours at a stretch, with a three hours' interval of rest. He did not approve of the forenoon and afternoon sets. If the children had three hours' rest they would go home. That was the result of his experience in Ahmedabad, where the system worked well. The outside of the roofs of mills and factories should be white-washed in the month of April, in order to reduce the temperature of the work-rooms. Mr. F. G. Mc. Cormack. *Oral evidence.*

NOTE.—Mr. McCormack was not asked to submit written evidence.

WITNESS No. 107.

Mr. Ramnarayan Baldev, manager of Mr. Shaikadam Esufbhoy's Ginning and Pressing Factory, Jalgaon.

We employed in the gin factory—men 30, women 84, children 0. In the press factory—men 70, women 6, children 0. The gin factory works for two months and a half. The press Mr. Ramnarayan Baldev. *Written evidence.*

Mr. Ramnarayan Baldev.

factory works for four months. In both cases they commence in November and stop at the end of April. The gin factory works from 5 A. M., to 8 P. M.; the press factory works from 6 A. M. to 6 P. M. In 24 hours, a person employed in the ginning or pressing factory actually works at the most for about 10 hours. Even during this time intervals of rest for answering the calls of nature, etc., are freely allowed. I do not approve of the proposal to bring under the Factory Act ginning factories and presses, irrespective of the number of months they work in a year. Owing to the large increase in the number of factories the work has been divided and reduced to a minimum. There is, therefore, no strain of work on the labourers. I do not approve of prohibiting the employment of women on night work. No inconvenience is caused, as they are employed by shifts and sets. Our line shaft is very well fenced. It is quite enough, if it is well fenced. It is not necessary to prohibit women from working in front of the opener. For preventing accidents from stones being hurled out from the opener, or from fires occurring there, I beg to suggest that the raw cotton should be well cleaned and freed from stones and other inflammable materials before it is put into the opener. The place should be well equipped with fire extinguishing appliances. There have been only two accidents in the last 5 years; at that time the fencing was incomplete

Oral evidence.

Witness stated that the Factory Act was applied to his factory, and it affected the hands injuriously in that they lost overtime pay. It was his opinion that the villagers did not care for the work as much as formerly. In olden days the whole family worked in the factory, but this was not the case now, as a result of the restrictions imposed by the Act. Women could not work at night according to the Act. Three years ago one of his female workers got caught in the line shaft and was killed. Since then the shaft had been fenced. Females were not allowed to work in front of his opener, and he had had no accidents with it. Witness objected to any restriction of adult male labour. Ginning work was so irregular that it was difficult now to obtain hands. The Act had been applied to East Khándesh since 1881. One result of the Act was that they could not gin the cotton so quickly as they would like, and the merchants were not able to fulfil their contracts in time. They stocked their cotton, and when they saw a favourable price in the market, they made haste to get it ginned. They did not have it ginned at once on account of the cost of ginning. Should rain come, then there was danger of loss, but not otherwise. One-sixteenth part of the cotton was still ginned by hand.

WITNESS No. 108.

Mr. Alladinbhoy Somjee, Chálisgaon.

Mr. Alladinbhoy Somjee.
Written evidence.

I am an owner of the Chálisgaon Cotton Ginning Factory at Chálisgaon. The number of men employed as daily wage labourers is 55, and as monthly wage labourers 53 No children are employed. The factory works from the middle of November to the middle of March, at the latest, when there is a good season, but if the cotton crop be small it works for a lesser period. The factory usually works from 5-30 A. M. to 8 P. M. The average number of hours a person works is about 12; as for the intervals of rest, there is no fixed time or rule, but generally the labourer carries the stuff from place to place and when there is no more space for him to fill he stops, and waits till that stuff is passed through the machine, and then begins again. These intervals occur three to four times a day, and the interval sometimes ranges from an hour to two hours. I don't approve of the proposal to bring ginning factories under the Factory Act. My reasons for this are as follows:—

(1) There is a great contrast between men and women working in a spinning mill and in a ginning factory; the former work in a confined space, while in ginning factories the men work in the open, and the women work in the factory buildings, which are well ventilated from all sides and through the roof.

(2) The men and women working in ginning factories are all day labourers, and they work in a factory as long as they like, and leave when they like, and go to other sorts of work, such as agricultural work, building work, etc., and hence they don't work for any great length of time in a factory. We have always to replace them by new labourers, whenever they leave us. In fact they are not skilled labourers.

(3) It is very easy for them to leave the factories and go to any work they like, because it is customary in ginning factories to pay them every week, and not as in spinning mills where the wages are paid every month, holding two or three weeks' wages in hand. If the hands leave suddenly, as they do in ginning factories, their wages in spinning mills are forfeited, which is not done in ginning factories.

(4) The hands in a ginning factory never work at a stretch for four hours during the day.

(5) If the ginning factories are brought under the Factory Act, both the labourers and the factory owners will suffer. The labourers, who now get the wages for full-time, will, when the factory comes under the Factory Act, lose some portion of their wage, while the factory owners will suffer in the economical working of the factory.

(6) In case the ginning factories are brought under the Factory Act, there will be a great risk to the agricultural and mercantile people, because the crop which is all cleared and financed will take about 25 *per cent.* more time to dispose of; hence the risk of fire will be increased, and the ups and downs of the market will affect the crop for a longer time, and the agricultural people will hardly have time to get their grounds ready for the next season.

(7) The ginning industry is an industry which the Government has always encouraged and helped. The produce of the land, when compared with the statistics of 25 years ago, will prove that it has increased by more than 30 to 40 *per cent.*, and I fully believe that this sort of encouragement will still add to the prosperity of the country and any Act or law saddling the ginning factories with additional burdens will tend to cripple it. Mr. Alladinbhoy Tomjee.

I approve of the suggestion that the employment of women at night should be prohibited, but the women don't work all night in ginning factories. They work till 8 P. M. at night, which I don't think unreasonable. Assuming that it is decided to make the Factory Act applicable to all ginning factories, I think special provisions, modifying the general law, will be necessary in the case of ginning factories and presses. It is true that, in a large number of ginning mills the line shaft is inadequately fenced, and I see no objection to prescribing that the shafting must be cased in between the drums. I don't think that women should be prohibited from working in front of the opener. A suggestion to prevent accidents from stones being hurled out of the opener is that every opener must have a delivery lattice, in which case the woman in front of the opener will be properly protected. As for fires occurring before the openers of a ginning factory, they are never serious, because the raw cotton does not take fire so quickly or so seriously as the ginned cotton, and the loss is always immaterial, and there is no danger to life. There has been no accident of any sort during the last five years—I can safely say for the last 25 years—in my factory.

Oral evidence.

Witness stated that he had owned the Chalisgaon factory since 1884. In practice it was under the Act, but according to law it ought not to be. His factory worked from 5-30 P. M. to 8 p. m. The males received six annas a day and the females three annas. These hours were not too long for the men, while the women had reliefs which brought their working hours down to ten. He had 48 gins, and employed 72 women for them. Formerly he employed 64 women, but on the Collector's suggestion he employed eight more in order to bring himself well within the Act. The Collector withheld his permission to the time-table until these extra women were employed. Witness estimated that if the hours of adult males were limited to 12 it would increase the cost of ginning by 25 *per cent.* He objected to the restriction of adult male labour, and was of opinion that he could not get sufficient men for two shifts. According to his reading of the Act women were not allowed to work after 8 P. M., even by relief. He did not incur any loss from the Act, as at present applied; but there must not be any more restrictions. There were four gins at Chalisgaon and three presses, and it was difficult to get sufficient labour, especially in those years when the Nizam's territory had a good cotton crop. He objected to the restriction of male and female labour in any factory. In England, for instance, women worked in bars until 12 P. M. The line shaft should always be adequately fenced, and the platform properly supported. He had three openers in his ginning factory for opening the cotton before it was ginned. The press opener was for mixing cotton. Should there be a fire in the ginning opener it only destroyed the cotton in the opener, and there was no danger to the work people. Some merchants objected to their cotton being put through the ginning opener before ginning, on account of the small percentage of cotton lost thereby. On the other hand, the ginning opener made the cotton purer. He always used his opener, which he considered to be a protection against fire in the ginning shed. Very often there was a match in the cotton, dropped by one of the carters who bring in the cotton, and he considered it better to lose a small quantity in the opener than a larger quantity in the ginning shed. Witness was a weaving master in 1876 at the Coorla mills. He had all castes in his ginning factory, but they would not work together. The castes were separated in the ginning room. He had no objection to the present application of the Act, but would not like any more restrictions. He only approved of women and men working at night when they had not worked during the day.

Witness No. 109.

Captain. C. H. S. Lincoln, I.M.S., Civil Surgeon, Dhulia.

Written evidence.

The factory operatives I am acquainted with are those that work in the ginning and press factories of the Khandesh District, both East and West. I regret I cannot supply the Commission with statistics, showing the relative healthiness of these operatives as compared with that of the non-factory population of the same class, but from my limited experience of one year as medical inspector of factories in this district, and referring, more especially, to the operatives working in the ginning and press factories at Dhulia (where I am stationed) I am of opinion that the health of the operatives is quite as good as that of the non-factory population of the same class. I am of opinion that there is no appreciable difference in the physique of factory workers as compared with others of the same class. In connection with this point, I have to say that the ginning and press factories are only seasonal ones, and work at the most about five months in the year, and even then not continuously; many of them, from my experience of last year, worked very irregularly, frequently stopping for several days at a time. The factory population is, to some extent, a floating one, some of the operatives coming from other districts, and directly the season is over they return to their homes, so that for about seven months in the year they are engaged in other occupations—principally agriculture. During the time they work in the factories, the operatives do not, as far as I can ascertain, suffer from any specific diseases as compared with the general population. My remarks on this point refer especially to the operatives working in the factories at Dhulia—extremely few having attended the Dhulia Civil Hospital for treatment, and these were only for trivial complaints. As regards questions 4 and 5 for medical witnesses my experience is so limited, there being only one mill at Jalgaon and one railway workshop at Bhusawal that employ children, that I am not in a position to pass any practical opinion. To both the above factories I am not Captain C. H. S. Lincoln, I.M.S.

ptain C. H. S. Lincoln, I. M. S.

the certifying surgeon. As regards the medical inspection of the factories of Khandesh, I am of opinion that a full-time medical inspector is not required. The Civil Surgeon of the district (who is generally an officer of the Indian Medical Service) is, I consider, the proper person to perform this duty. He is in a much better position to pay a surprise visit; and, moreover, a full-time medical inspector would involve a greater expense. Again, the medical inspection of these factories does not require any special medical or sanitary training, and it can be as efficiently carried out by the District Surgeon as by the full-time medical inspector, provided the number of inspections remains the same. I am of opinion that one privy seat for 50 workers is quite sufficient. I beg to refer to the following matters:—

(*a*) Women with infants in arms should not be allowed to work in the gins. I have, on several occasions, seen infants placed by the side of their mothers, while the latter were at work, and this must be detrimental to the health of the infants.

(*b*) Practically, all the ginning factories employ women who are not supposed to work more than 11 hours a day, and this is carried out during a working day, lasting from 5 A.M. to 8 P.M. by means of shifts. The practice is an excellent one, if it is properly carried out, but, in some cases, I do not think it is. The relieving person is sometimes a young boy or girl (very probably a relation of the operative) who has no business to be seen inside a factory of this type. To prevent this irregularity, I am of opinion that the manager should be able at any time, when called upon by the inspector, to produce all or most of the women working in his factory for inspection, and thus it can be seen whether the shift system really exists, and whether healthy adult women are employed.

al evidence.

Witness stated that in his inspections he visited the compounds and latrines, saw the operatives, the water arrangements, and the provisions against fire. He received Rs. 16 as a fee for inspecting a ginning factory, and Rs. 32 for a cotton mill. The ginning factories were inspected once a year, and the cotton mills twice a year. Witness did not approve of the inspection work being given to a specially appointed medical officer. He considered that the Civil Surgeon was quite capable of carrying out the work. His reports were entered in the inspection-books, and a copy of his remarks was sent to the Collector. He approved of a copy of these remarks being forwarded also to the owner of the factory. Witness received no intimation that his orders were carried out, but he referred to his notes when again inspecting the factory. He had not seen any gins working late at night. If gins worked late they had to do so on a shift system, but to see whether the shifts worked in practice, as they were intended to be worked, one would have to be on the premises for a whole day. There had been one or two accidents at Dhulia through workers becoming caught in the line shaft. In the gins that witness had to inspect no women were allowed to work in front of the press house opener. It was difficult to express any opinion as to the health of the operatives. They were not a stationary population. If a woman were ill she dropped out, and it was only the fit who survived. Consequently, he could not say whether the work affected their health adversely or not. There was a great deal of dust which must irritate the throat and lungs, and he should naturally expect a worker to get ill if he stayed too long in that atmosphere. No attempts were made to prevent this dust from fouling the air, and he thought it might be alleviated by means of fans. Witness thought that the latrines were used, but were always insanitary. He would exempt the small outlying gins and presses from the obligation of providing latrines. The provision of urinals would be a great advantage. Witness had sometimes seen children in arms on the ginning platform. He considered it was harder on the child having to breathe the atmosphere there than it was for the mother to lose her work. He was of opinion that the system in Khandesh, regulating the hours of work, was satisfactory. One sometimes saw a woman relieved by a very small child. This should be prohibited The system of having three persons for two gins was practically in force all over Khandesh. The gins at Jalgaon were a fair sample of those in other parts of Khandesh.

WITNESS NO. 110.

r. Vithal Kashinath Manohar.

Mr. Vithal Kashinath Manohar, of the Penkar Cotton Manufacturing Company, Limited, Dhulia.

Written evidence.

The number of men employed varies from 30 to 80, and the number of women from 20 to 90. No children are employed. The varirations depend upon the number of gins working each day. The periods during which the factory worked for the last five years are as follows:—

1st November 1901 to 20th February 1902.

16th November 1902 to March 1903.

30th October 1903 to 9th February 1904.

1st November 1905 to 6th May 1906.

22nd October 1906 to 23rd April 1907.

The factory works from 5 a m. to 8 p.m., with a half-hour's rest at noon. The average number of hours a person actually works varies from six to eight daily, in spite of the 15 hours attendance. I will explain this more fully. Supposing that the number of gins working is 40, I have to employ about 40 males to do the work. Out of this number, 4 men work on two single roller openers, from which it is obvious that if the openers worked even for 15 hours (which they never do), each man has to work for 7½ hours only. Then 8 men are required to carry unginned cotton from the openers to the gin platform, which is hard by. This is a sort of piece work; that is, every man has to supply cotton to five gins. If a gin worked well, and up to its standard output, it would require 12½ *maunds* of cotton for 15 hours, so that every man has to remove 6¼ carts or 62½ *maunds* of cotton to a distance of 20 to 30 feet, which will not require even 7 hours. The same remarks apply to the eight men whose duty it is to bring cotton from the heap in the compound to the openers. In this case the distance from the heap to the openers varies, and I have sometimes

to employ more men to assist the original ones. Next, there are nine men whose duty it is to fill the ginned cotton into bags. Generally one man fills as much cotton as will be turned out by five gins. Every gin turns out 2½ *pullas*, that is, 300 *seers*, in 15 hours. This comes to 12½ *pullas*. This quantity is contained in 15 bags, so that each man has to fill 15 bags within 15 hours, which will not require 6 hours at the most. Three men are employed for weighing coal. Each day of 15 hours will consume 4½ tons of coal. This quantity is weighed by these three men, which, in my opinion, is not at all hard work. The only other work is the removal of cotton seed from the gins. Each man removes the seed from four or five gins, as his strength permits. Each gin turns out 1½ *khandi*, or 600 *seers per* day of 15 hours. All these men are paid weekly. Now to consider the work of those paid by the month. These men include the engineer and his assistant, fireman, head fitter and his staff, fitters, oilmen, *mochi*, and the employés in the machine shop. The engineer has to attend at the factory, and to superintend it; he cannot leave the compound for 15 hours. Practically speaking, he has no manual work. The duty of his assistants differs slightly, inasmuch as the engineer can freely move about the compound, while his assistants have to confine themselves mostly to the engine-room without doing any manual work. The fireman's work is, no doubt, hard, but there are two firemen employed on one boiler. Generally, each fireman works for about four hours and then takes a rest for the next four hours, while his mate does his duty. The head fitter has the same duty as the engineer; each fitter, with an oilman, has to look after 10 gins. This fitter has to work actually for about three hours in the morning setting his gins. The machine department is worked for ten hours only, each day. I don't approve of the proposal that the ginning and pressing factories should be brought under the Factory Act. The factories here have been under this Act for nearly five or six years. This caused a great many inconveniences in keeping the register of females. Before the application of the Act, the manager used to employ relief hands for females, because it is practically impossible for a female to work constantly for 15 hours. I have seen instances where the gins ran idle, because the woman that was working the gin left it for some natural call, or to take her food. It is folly to think that females will work for 15 hours, even under pressure. I have also seen instances in such cases of strikes on the part of the females. It is impossible for a manager to keep the whole number of females within the compound for 15 hours. When the relief hands relieve some of the females, these females used to go to their houses to do their domestic business, and, if, at such a time, the inspector comes to inspect the register, the manager is at a loss to tally the number of females with the register. If the responsibility for this is to be brought against anybody, it should be against the *mukadam* only, because he is the only person who has a direct control over the women workers. I am of opinion that women should not be prohibited from doing night work. This restriction would tell upon the earnings of the poor. The monthly return, stating the dates of stoppages in the next month, has to be sent to the Magistrate. This should be cancelled, because the gin-owners have to depend upon the merchants for getting work in the next month. I am against the fencing of the line shaft, that has been tried in this part. It is found to inconvenience the man who is working there in getting the belts on the drums. Women should not be prohibited from working in front of the openers. In single roller openers there is no fear of getting stones hurled out and in double roller openers, if the precaution be taken to keep the front "*satli*" running, the danger can be avoided. As to fires, I have not seen a single instance of injury to females or males, because, though fires are frequent, they are always on the surface, and do not get into the interior, as in the case of ginned cotton. No accident of any kind has occurred in this factory during the last five years.

Mr. Vithal Ka nath Manohar.

Oral evidence.

Witness stated that owing to their gins having been brought under the Act owners had suffered various inconveniences, notably in regard to fencing of machinery and loss of time in ginning. There was no necessity for guarding a line shaft where skilful operatives were employed. The guards that he had had to put on the line shaft had made it inconvenient for the men working there, and there was now more danger through the belting becoming entangled in the guard. He had no strap-hangers such as they had in England. The females only worked for 11 hours, and if the working day were 15 hours then extra women were employed. They did not have time-tables for the gins in Dhulia. The women arranged their rests among themselves. Having to send out monthly returns of stoppages, and being open to inspection, were also inconveniences: women should be allowed to work at night, providing they did not work more than 11 hours. The women were paid three annas and the men from five to six annas a day. He did not consider that a day of 15 hours was exhausting. When there was famine in the Deccan he obtained plenty of labour, and at the end of the season these workers were always well developed and nourished. He did not think that the men worked more then six hours a day. In outside employment women could only earn two annas for a 12 hours' day. There was no danger of a stone being hurled out of a single ginning opener. The women sat on a raised platform, and were out of danger. If owners were forced to employ men only in front of openers it would mean an increased cost in wages. The press opener was used for mixing, and was different from the ginning opener. The cotton was fed under the opener, and it came away at a great speed. The men drew the cotton on one side, and passed it to the women. He approved of women being prohibited from working in front of a press opener. Before the Khandesh factories were brought under the Act owners always used to employ more women than were really required. This system of relief was now compulsory. It was no hardship, but any further restriction of labour would be inconvenient. As a ginning owner he had no objection to the restriction of hours for women. It would be advisable to carry away the dust and fluff in gins by means of fans if possible. The cost of the fans would, however, have to be considered. He did not think that male labour was available for two shifts. He had sixty gins, and if he were working a 15 hours' day he should employ 83 women. The calculation he adopted was:—the number of gins, multiplied by the hours worked, and divided by 11. This was according to the Collector's orders. Witness had no certificated assistant engineer to help him. It was owing to the Collector insisting on a certificated engineer being employed for night work that the factories gave up working at night. Rather than go to this extra expense they did not work at night. Until that restriction was brought in they used to work 24 hours on one or two days in the month. When they did this night work there were only a few factories, and so the labour supply was adequate. If fewer women were in any case found to be employed than the Act

Mr. Vithal Kashinath Manohar.

or the orders thereunder required, having regard to the number of gins working—then the responsibility should fall on the *mukadam*, who has control of the women, and not on the manager or owner, who never desire that the act or rules should be contravened.

WITNESS No. 111.

Mr. Cursetji Jivaji Sonavalla, proprietor of the Cursetji Jivaji Sonavalla Cotton Factory and Press at Dhulia.

Mr. Cursetji Jivaji Sonavalla. *Oral evidence.*

Witness stated that he had had 20 years' experience in the ginning industry. There was no injury to the industry from the Act, as at present applied, but should adult labour be restricted to 12 hours, then ginning could only be carried on at a loss. He paid five to six annas a day to male adults for 15 or 16 hours' work, and if the day were limited to 12 hours the workers would receive less wages. The females received three annas a day, and 25 *per cent.* extra women were regularly employed in order to keep the hours of actual work for each down to 11. Seven years ago he worked his factory for 24 hours, and had two shifts. The women worked at night. At present there was no pressure of work such as would necessitate double shifts Witness had had small fires in his ginning opener, but they had never been attended with loss of life. His line shaft was properly fenced, but he found it difficult to fence the portion near the coupling. He was also manager and partner of Balaram's Press, Dhulia, where there was an opener. Men worked right in front of the opener, and the women were beyond them. He had had fires in this opener, but nobody had ever been burnt. In the Mofussil Press, Dhulia, some eight years ago, some women working in front of the opener were burnt to death. They were sitting on the ground at the time, and witness thought they became frightened, otherwise they could have escaped. In his opinion there was no danger if the women worked cautiously. They had a lattice on the opener, and in the event of a stone being thrown from the opener it would strike the lattice and glance upwards. Witness had never heard of an accident as the result of a stone being thrown out of the opener. If men only were allowed to work in front of the opener it would mean that the owners would have to pay increased wages. It might be possible to have a protecting wall behind which the cotton could be raked within reach of the women. Witness did not think this would minimise the danger in case of fire. The outbreaks were always instantaneous, all the cotton in the vicinity becoming ignited; but if the women were cautious there would be no serious accidents. He had heard of the accident at Amalner, but did not know how many women were killed on that occasion. In a Manmad press ten years ago there was a fire, and as there was only one ladder for the workers to escape by, there was a crush and four women were killed. Since then it had been the practice to have two ladders. His press opener had two drums side by side. The cotton first travelled above and then below. He was of opinion that the cleaning of latrines should be taken over by the municipality. In the gins a woman earned three annas a day, and an additional anna in the busy season, and the men from five to six annas. In the presses the women earned from four to six annas, and the men eight to ten annas a day. These labourers generally came from the Deccan to make high wages, and during their short stay in Khándesh they earn more than double what they would at home. Should adult labour be restricted to 12 hours work a day, these labourers would not come. As there are three times as many gins as are required, each factory should be allowed to work for its short season as it likes. Any restriction would ruin the industry and hamper the cultivation of cotton.

NOTE.—The witness did not submit written evidence.

WITNESS No. 112.

Mr. E. S. Shroff, manager, New French Press Company, Limited, Khamgaon.

Mr. E. S. Shroff. *Written evidence.*

The name of the Company of which I have been the manager for over 12 years is 'The New French Press Company, Limited.' It has in one compound 1 press factory and 1 ginning mill. The press factory employs—

(1) A staff of monthly paid workmen		8
(2) A set of men on piece-work employed on working days only		35
Total ...		43

The ginning mill having 46 Platts single roller gins employs—

(1) A staff on monthly paid male workmen		18
(2) A set of weekly paid labourers when the mill is working		31
Total males ...		49
(3) And on working days, a set of weekly paid females		68
Total males and females ...		117

The press factory, according to the average of 5 seasons, commences work at the earliest on 7th November, at the latest on 13th November, and it stops working on 29th June following. The ginning mill, according to the average of 5 seasons, commences work at the earliest on 5th November, at the latest on 11th November and it stops work at the earliest on 5th March, and at the latest on 23rd June. The press factory works 12 hours, generally from 6, 7, 8 A. M. to 6, 7, 8 P. M. The ginning mill, when it works by day, works for 12 hours from 6 A. M. to 6 P. M., and on the occasions when it works at night time, for 12 hours from 6 P. M. to 6. A. M. The average number of hours of a person employed in a press factory, working for the day time only, is about 10½ hours. In a ginning mill, whether working for the day time, or at night time, for 12 hours, respectively, a male works for 10½ hours, a female works for about 9 hours. A male gets half an hour at noon, and another hour during the day of 12 hours, or one and half hours' aggregate rest,

whether working in a press or ginning mill. A female in a ginning mill working for the day, or at night, gets in each 12 hours 3 hours' rest, or in 24 hours arrangement for giving 6 hours' rest is made by shifts. I am of opinion that cotton presses and ginning mills should be exempted from the jurisdiction of the Factories Act so far as the hours of labour are concerned. But in other respects the Act should apply, irrespective of the number of months the factories work for the reasons stated below :—There are about 500 press factories in India. They turn out 30 lakhs of bales. The pressing average *per* press is 6,000 bales turned out in 50 days. Although press factories are kept open for work for a season of about 7 months, they actually work on an average from 50 to 90 days, according as each factory gets more or less work in a season. The pressing of bales is done in a factory by contract, by about 30 to 35 men working each day. Taking an output of 120 bales *per* press, it would require 500 gangs, or about 17,500 men to do the work. But as the season of 7 months begins and ends at different months and in succession in different districts, the work of pressing in all India goes on successively for about 9 months, and about half of 17,500 men, or about 8,750 men are daily working scattered over large districts. There are about 1,500 gin mills in all India. Out of 30 lakhs of cotton bales pressed in India in a year, 27 lakhs are ginned by 1,500 gin mills. Supposing 20 *per cent.* of them do not work, 1,200 will be working; each mill therefore turns out cotton equal to 2,250 bales on an average. As the season in India in different districts is at different periods, in succession about 700 of them would be working at one time and would gin 15,75,000 bales. But as a gin factory works on an average 100 days in a season, the 700 factories would be ginning in one day about 15,750 bales. As each gin in a factory turns out cotton equal to the weight one bale, at the least, about 15,750 gins would be daily at work, and would require 23,625 women daily. In view of this small number of women required daily for the ginning industry, throughout India, for only 100 days at the most, I submit that their hours of labour should not be restricted or interfered with. The above figures show that as compared with the spinning and weaving industry a proportionately very small number of men and women are working in cotton presses and ginning factories. Both men and women know very well how to make their own arrangements, and how to get the necessary reliefs to enable them to take a rest every now and then. The women more particularly. can and do always arrange with other members of their families to replace them when they absent themselves for cooking, or other household duties, or for attending to their children. The press and gin factories, whenever stocks accumulate owing to unginned cotton coming in a rush, have to be worked day and night, so as to gin the cotton in the shortest time, and to save thereby interest, insurance and the deterioration that would otherwise result. I am of opinion that there should be no prohibition against employing women in gin mills for night work. Out of 15,750 gins shown above as working daily, 30 *per cent.*, *i. e.* 5,725, are worked about 30 days in a season for night work, giving employment to 8,587 women for 30 nights. This is a small number. If it is decided that the press and gin factories should be brought under the Factory Act. they should be exempted from the provisions in the Act regarding the hours of labour of males and females. If this is not allowed, then I would suggest that the provision regarding the employing of women in shifts for day and night work should be clearly laid down so as to leave no room for misconstruction. I agree with the view that the line shaft between the drums in gin factories should be cased. I agree with the suggestion to prohibit women from working in front of the opener in the press house. Accidents from stones coming out of the opener in the press house are likely to affect the two men, one on each side of the opener, sliding or shifting cotton near the outlet by a piece of stick moved by each of them. But they are on the alert, and as soon as they hear the noise of a stone in the opener, they remove their hands from the path of the stone. A stone flung out of an opener in our press factory is a rare occurrence. No one has hitherto been struck. Regarding the occurrence of fire in the opener, there is a safeguard in having a whirling sprinkler connected with a pipe, leading from the hydraulic pipe working the half press by a wheel-valve arrangement, kept near the half press valve-man, and under his immediate control. The sprinkler to be overhead, near the outlet of the opener of the press (there is no opener in our gin factory). There should also be near the press factory a manual fire engine ready for immediate action when the alarm is given. There has been no accident from fire in the press house or opener during the last five years. But in the gin house, owing to sulphur matches being found occasionally in cotton, and not detected on the gin platforms, or by the women feeding the gins, fire sometimes takes place at the outlet of the gin in the cotton, and as there is a bucket of water near every gin, and two men in charge of a set of 10 gins, the fire is never allowed to spread. In 9 cases out of 10, the women at the gin when feeding it find out any matches, and remove them.

Mr. E. S. Shroff.

Oral evidence.

Witness expressed the opinion that the wording of the present Act in regard to the hours of female labour was very ambiguous. He took it that women, under sub-section (2) and (3) of section 6, as interpreted by sub-section 2 of section 10 of the Act, could actually work for 11 hours. But the factory inspector had ruled that 25 *per cent.* extra females must be employed, which was tantamount to working the women for 9½ hours a day only. He was law-abiding and so employed these extra hands. He had 46 gins, and employed 70 women, eight being employed in the pits. He hoped that the new Act would be quite free from any ambiguity as regards the hours of work for women. He suggested that it should be laid down clearly in the Act that for arriving at the total combined number of *necessary* and of *extra* females for shifts in a ginning factory the number of women actually required for working the gins in operation should be multiplied by the number of hours during which the factory is to run (which however should not exceed 15 hours with one set of women) and the product should be divided by 11. The terms "sets" and "shifts" used in the Act should be defined. The ginning factories should be permitted to work at night with female labour. He thought that the Factory Act should apply to gins and presses in regard to sanitation and the fencing of machinery, but not in regard to labour. There were now three times as many factories as were required to gin the normal crop and as the seed cotton came in rushes it was necessary that he should get it ginned as quickly as possible. Consequently labour should not be restricted. The health of the operatives had not suffered because the season was so short. He approved of machinery being properly fenced. He had had no serious accidents in his gins and women were not allowed to work in front of the press house opener. There were twelve ginning factories in Kham-

r. E. S. Shroff.

gaon and they never worked later, but three or four worked for from 15 to 30 nights during the season, with separate shifts of females. This year there was no combination among the gin-owners whereas previously they had always combined Two gins were not working this year. They charged according to the quantity of cotton turned out from Rs..2 to Rs. 2-8-0 *per* 2ɔ0 lbs. When there was a pool they charged Rs. 4-4-0 the same as in Jalgaon. The women earned three annas a day and the men from six annas to one rupee. Occasionally the inspector asked them to make costly improvements. He thought that if the owner did not work his factory after receiving an order of this kind it should be optional with him to carry it out, but if he did work the factory it should be carried out, a reasonable time for this being given him. It is impracticable to carry out that portion of section 10 which rules that in the notice to be set up in some conspicuous place in the factory the owner is to show the times at which such intervals as are required by section 6 (3) shall be allowed to women and the length of each interval. A woman cannot take her intervals of rest at the exact time specified against her number or for any fixed number of times and it would be quite sufficient if the factory inspector fixed the percentage of extra women for shifts as required by the Act so that the intervals of rest, as prescribed by the Act, may be enjoyed by each woman, without restricting them as to how long and how often they leave their work for casual absences or meals.

Witness No. 113.

Mr. Framjee Jamsetjee of Gaddum's Agency, Jalgaon.

Mr. Framjee Jamsetjee. *Written evidence.*

I represent the New Berar Company, Limited. The press has not been used for the last six years on account of joint working. When the press works, about 10 men are employed to work the machinery, 24 lashers, and 10 to 20 opener-men are required. Four to six women are employed outside the press to clean gunnies. No women or children are engaged in working at the opener, but outside the press 10 to 20 women are required to clean cotton, in a separate temporary shed. The period during which the press usually works in a full season is from 70 to 90 days at the utmost, commencing from November and going on to the end of June. The usual working hours are 12, when in full work, otherwise 6 to 9 hours a day. The average number of hours a person works in a press is 12, and in this time he gets an interval of rest for 1½ hours. I do not think that presses should be brought under the Factory Act, taking into consideration the actual working days in a season. During the last 10 years, several new factories have been erected, and so full work is not obtainable. Some factories are not worked in order to save expenses. In Jalgaon there are 7 press factories, out of which only 3 are working. The total average of the bales for the season is 30 to 35 thousand, which would not pay the working expenses of all the factories. No women are employed in presses during the night. If the Factory Act be applied to presses, special provisions, modifying the general law would be necessary in order to facilitate business. Cotton merchants require to send their bales within the contract time, and they want to press the cotton early and late in such cases. The pressure occurs at certain times only. Permission must be given to work overtime. Now-a-days competition is so great that one cannot secure much, if any, profit; besides, if would be difficult to get lashers unless there was the incentive of overtime payments. The Factory Act, if not modified, will not allow this. No women are employed to work the press opener. No stones are hurled from the opener if the cotton is carefully shaken before passing into the opener. To prevent accidents from stones or fire, the feeding of the opener should be stopped when cotton is removed from its front. I beg to draw the attention of the Commission to the following matters:—In the interests of trade, it is very important to reduce all unnecessary burdens and hindrances, and to save manufacturers from the clutches of the Act as much as possible. The press factories require no Factory Act. Long ago, when the Act was passed, it was not extended to Gujarat and Broach districts on the strength of the strong and reasonable protests from the gentlemen who were then taking pains to increase the number of presses and gins, in order to facilitate trade, and secure deliveries of cotton in due time. The Government accepted the arguments, and the Act was not put in force. The writer has no personal experience of ginning factories, but a considerable general experience enables him to say that gins do not require the Factory Act Now-a-days it is incumbent on the factories to reduce charges to the utmost possible extent, but the present Act requires extra expenditure, and if carried on, as it is, the price of cotton will rise and the trade will suffer.

Oral evidence.

Witness stated that he had been connected with the pressing industry since 1873. There had been accidents to women working in front of press openers, but he thought that if the workers were careful there need be no accidents. He only employed women to take the cotton to the opener. He approved of women being prohibited from working in front of press openers. The application of the Act had not actually hampered the industry, but proprietors were afraid of further restrictions. There ought to be no restriction of labour, because it was necessary to gin and press cotton quickly in order to enable merchants to fulfil their contracts. When they used to work for 24 hours, two shifts were always employed. Now, when they worked for three or four hours beyond the half day, he thought they ought to be allowed to keep on the same men. The restriction against this ought to be removed. Competition was keen and profits low, and in ten years ginning factories had increased by 50 *per cent.* The industry ought not, therefore, to be further hampered. His hands came from the Deccan. They were *ghatis*, and strong. A few drank, but not many, and they all had four meals a day Witness thought that the compulsory weekly holiday would have to be bazaar day, and not Sunday. The working days numbered from 60 to 70 in a season, and as the worker during that time had to make enough money for the rest of the year, he ought to be allowed to work overtime. The reason why the Gujarat and Broach gins did not come under the Act was because the owners in those districts made a representation on this matter, and the Act was not applied. The Broach season only lasted three months, and if the Act had been applied there the industry in that district would have been killed.

WITNESS No. 114.

Mr. H. W. J. Bagnell, I. C. S., District Magistrate, Broach.

Mr. H. W. J. Bagnell. *Writ'en evidence*

I append a note on the work in gins and presses in this district, as also another note on the case as put forward by the gin and press owners. I approve of the proposal to bring under the Factory Act ginning mills and presses, irrespective of the number of months which they work. The introduction of the Factory Act will necessitate proper fencing, expert inspection, proper intervals of rest in the month, fixed intervals of rest in the 24 hours for men, women and children, the regularised and proper employment of children between 9 and 14 as half-timers and not as whole-timers as at present, and the prohibition of children under 9 from work at all in feeding the gins, whilst proper attention will be compelled to sanitation, a most essential provision. The surroundings of the numerous gins in Palej constitute a veritable plague spot of dirt and filth, the workers living surrounded by their own ordure in a most disgraceful and insanitary fashion. It is not the duty either of village sanitary boards, or of the District Board, or of the District Officers, to keep these places in a reasonable state of sanitation and decency, that duty devolves on their owners. I consider that the Act is needed to compel fencing of the line shafting, both of overhead shafting and of low level shafting. Although women and children do get intervals of rest, yet this is all left to chance and their good fortune and good luck in getting casual unpaid help during the excessive hours of work. There is no doubt that for a month or six weeks children and women are greatly overworked, and have to undergo a strain which tells on them much. The Act applies to Khándesh and Dhárwár, so it could be worked in Broach also. Personally, I do not think that women should work at night, as in addition to night work they often have to cook and fetch water as well, but if the harm of throwing some fifteen to twenty thousand women gin feeders out of work is greater than working them at night, they might be worked at night with a proviso limiting the women's hours to 12 out of the 24. Thus a factory working for 18 hours could well put in a shift of children for 6 hours out of the 18 in the day time. If the Factory Act be applied and amended so that women shall not work at night in spinning and weaving mills, a special provision may be made to let them work at night in gins and presses, with shifts, but for not more than 12 hours in the 24 hours, as above suggested. The line shafting is only fenced at the coupling drums, and that is not compulsory. The shafting revolves at 180 revolutions a minute. It should be compulsorily cased in between the drums, because in low level shafting about 2 or 3 feet from the ground any one falling against it would be knocked down and dashed to pieces: whilst the overhead shafting is far more dangerous, and any oiler or *moochi* falling against it must be killed. Women should not work in front of an opener, as they wear *sádis* and *cholis*, and get covered with cotton fluff, so that they become as dry faggots which any spark can ignite. Men can work at an opener with just a small loin cloth on, and so they are not liable to be burnt to death. The cotton should be well shaken out and spread before being put into the opener, and stones should be shaken out and removed. The opener should have a delivery lattice at the back. Openers are very little used in this district, say for 4 or 5 days in the season, and then only for very dirty cotton mixed up with leaves and dirt. Workmen in gins and presses should get compensation for injuries, and insurance against injuries should be compulsory.

The case as stated for the gin and press-owners.

The Factory Act should not be applied, because labour is hard to get and owners would suffer. The operatives suffer very little from long hours, because the season is so short. If the Act be applied, small gins will fail, as they will not get enough work in comparison with their expenses. Such gins and others may have to be removed from British territory to the adjacent Native States of Baroda and Rajpipla, where the Act will not apply. If ginning rates are raised in consequence of the application of the Act, merchants will take their cotton to be ginned and pressed in Native States. If work be limited to fixed hours, and if the additional labour cannot be obtained, the quantity ginned will be less, less cotton will be purchased, and it will be hard or impossible to meet fully all contracts for March and April delivery, the trade will be dislocated and complications and losses will occur. The funds will be locked up in heaps of unginned *kapas* and cotton liable to fire, and high rates of insurance will be charged. The work for women is light, and as they have many intervals of rest they can well work at night. If the Act be applied, women and children must be permitted to work at night, and for 18 hours out of the 24. No sanitary measures are needed, as all the hands work in open spaces in the fresh air. The gins are closed for native holidays, and also two or three times a month to clean the boiler, and each gin is stopped daily for repairs for one hour, and much casual unpaid help is given to gin feeders at all times. It is not necessary to case in the shafting as the workers can take care of themselves. Women can work in front of openers if there is a delivery lattice at the back, and if proper precautions are taken to shake out stones from the cotton.

A note on work in cotton gins and presses in the Broach District.

In Mr. Bamanshah's two gins 70 women and 22 children are employed on 92 gins, which are tended by all these women and children, whose ages vary from 10 upwards. The women get 4 annas a day, and the children the same. There are about six extra hands for the gins. In the Nasarwanji Hujibhoy Gin (J. N. Ginwalla and Company) there are 52 gins with 40 women and 25 paid children, or 65 in all, giving 13 spare hands. Bamanshah gins about 163 *bhars per* gin, and J. N. Ginwalla 52 *bhars per* gin in the season, which lasts for 60 to 85 days from the beginning of January to the end of March, depending on the quantity of the cotton crop and the amount of work the gin can get, and also whether the season is late or early. In the beginning of the season the gin does not work each day, and the hours are easy; later on it works from day light to dusk, and in the middle of February and for all or most of March the factory works at first from 6 A.M. to 10 P.M., and then from 4 A.M. to 12 P.M., according to the press of work. The highest pressure

r. H. W. J. agnell.

is in March in this district, because merchants have to fulfil their March delivery contracts in Bombay. It is also impossible to say with accuracy how many hours any man, woman or child actually works in a gin or press out of the 24. A woman or a child is held responsible for each gin, and the spare hands who may be engaged—from 6 for 92 gins, or 13 for 52 gins, or none at all—are there to feed the gin when a woman or child has to go away for food and rest: in some gins run by *banias* no spare hands are kept at all, and the woman contracts to tend a gin alone without paid help. Labour in gins is, however, supplied by whole families, or by small gangs of a man, his wife and some children, a sister, and children and daughter-in-law, and relations' children. Many unpaid children are put on by the paid women and older children workers to relieve them from time to time, so that if a fair amount of extra unpaid children come to a gin the paid women and children can get a good deal of rest at a time. If such small unpaid children are not readily available, the paid women and children have to work all the harder, and it is they who are responsible that a gin is always being fed all the time the engine is at work. A good many workers here in Ankleswar are *kharwas* from the Surat District, as they are very steady men and women, and strong, but a gang of 6 or 10 *kharwa* men insist that one man or woman shall be engaged and fully paid to cook and fetch water for them. If local workers come from the place where the gin is situated, they are helped from time to time by relations, probably children, who come in and feed the gins, but are not paid workers. Each gin is stopped from half an hour to an hour each day, in working hours, to clean and repair it, and to groove the leather rollers. A breakage in a gin may cause a stoppage of 2 hours or more. If gin feeders cannot get enough help they have to work for excessive hours, and the tendency is to put in quite small children to feed the gins when the regular feeders have to rest or sleep. The men and women employed in carrying the *kapas* from the heaps in the compound to the platforms of the gins have intervals of rest during the day and night, because when enough *kapas* is staked on the platform, they can rest till the heap has to be renewed. The men and women who remove the cotton seeds which fall below the gins take rest at intervals till another heap of seeds has collected 2 or 3 feet high. The actual work of feeding *kapas* to a gin is easy, but the hours of work are at times very long. If enough men are engaged in half pressing or fully pressing bales they can work by relays and take rest at times arranged amongst themselves, but of course the tendency is to have as few men and women as possible to do all the work, and division of labour in a press is so arranged that cotton mixers, and men and women on the openers who prepare the cotton for the press, are fully employed, and prepare so much cotton that the actual pressmen and heapers of bales cannot remain idle. The boilers have to be cleaned either twice or three times a month, and it takes from 4 A.M. to 6 P.M. to clean a boiler, and 6 more hours to get up steam from cold water. In this way there are two or three compulsory holidays in the month, and the gin has to stop for the native holiday of Sankrant in January, 1 day; for Holi and Parwa in March, 2 days; for Jamsedi Nowroj on the 21st March, and for Mohrum 1 day if it comes in February, March or April. They do not close for Ramnavmi. The work is hard, and a man gets disgusted and tired, and takes a rest for a day. It is hard to get labourers because the work is so hard, and field work is easier; but the pay is high and one gin tries to seduce labour from another. The Broach season is short one as compared with the Khandesh and Hubli season of nearly five months; in this short season the whole of the cotton must be ginned and pressed and despatched to Bombay for export and local consumption. A family comes and insists on being engaged all together, otherwise they refuse to work. Hands have to be treated with consideration, and if fined they are apt to go right away from the factory. It is believed that the Factory Act is applied to the Khandesh and Hubli gins and presses because they work for more than 4 months with more than 50 hands. There are fewer gins and presses in Khandesh than in Broach in comparison with the amount of cotton to be ginned and pressed; so the Khandesh gins and presses get more work, and can afford to work in shifts. It is believed that they work in double shifts for 24 hours when there is a great pressure of work. In Broach there are a large number of gins, and possibly too many factories, so they get less work than in Khandesh, and could not always fill up a double shift though they could fill up an 18 hour day. The cotton has to be ginned quickly, otherwise it deteriorates rapidly if exposed to the sun and to dust. Little children are employed in the compound to pick out "yellow stain" in the cotton, where it has been injured by the boll worm. This inferior stained cotton must be picked out and sold separately, as, if a selector finds "yellow stain" in the cotton, he rejects the whole bale. The wages are often 5 annas to a man and 3 annas 6 pies to a woman, from daylight to dusk, and 1 anna and 6 pies respectively for overtime: when there is a great pressure of work, or a scarcity of male labour, a man gets 8 annas, children get 2½ to 3 annas a day, according to age. In Broach and Palej and Ankleshwar the local workers go home for 2 or 3 hours, and send a relation to work. On the steam presses men only are generally engaged. One in Broach has 32 *ghatis*, 5 fitters, 6 bale stackers 4 bale sewers, and 3 extra hands. They work from 5 A.M. to 10 P.M. The contract price for *ghati* labour is 2¼ annas *per* full pressed bale. Bale stackers get Rs. 1-8-0 *per* 100 bales, and bale sewers Re. 1 *per* 100 bales.

Note.—Mr Bagnell submitted this evidence after being examined orally at Broach (witness No. 23). He was not recalled for further oral examination.

Witness No. 115.

Mr. C. Hudson, I. C. S., District Magistrate of Dharwar.

Mr. C. Hudson. *Written evidence*

I do not approve of the proposal to bring under the Factory Act ginning mills and presses, irrespective of the number of months they work in a year. I have been pondering over the matter for about two months, and have lately visited three small factories so as to see matters for myself. Hubli and Gadag are the most important localities in this district. I have recently been in Hubli. Of course this is not the working season, but I was able to get a fair idea of how things stand at Hubli, Nargund and Navalgund. There are only five small factories in Hubli and about two dozen large ones. One of the small ones had a fatal accident, which was due to both carelessness and disobedience. It might have happened in any case. I admit that logically machinery is just as much in need of fencing in a small place as in a large one, but in actual practice there is less confusion in a small place, and more individual supervision. There are certainly no urinals or latrines at the mills or presses, but none in my opinion are needed, even in Hubli. The operatives work only for a short season, and so the excessive hours do not matter, I think. In self defence accidents from fire are likely to be guarded against, if possible. I think these small people should be left alone for the present in this district at any rate. There is a shortage of labour here even for ordinary agricultural purposes; and so I do not approve of the suggestion to prohibit the employment of women on night work. If I have correctly understood the expression "line shaft", it is here that the danger as regards inadequate fencing chiefly lies. But the shaft is difficult of access, and only one man who knows his way about is allowed to go near it. Some of them certainly look like death traps; but accidents occur very rarely. There might be a rule that no one should go in while the machinery is in motion; and a notice to this effect might be prominently displayed in every small factory.

Note.—Mr. Hudson was not called for oral examination.

AGRA.

WITNESS No. 116.

Mr. E. John, Agra.

E. John. *Written evidence.*

Ginning Factory.—John's Ginning Factory employs 148 men, 114 women, and no children. The season is from the 5th November to the 5th of March on an average. The hours of work vary according to the arrivals of the raw cotton (*kapas*) in the market. They average about 13 hours. The men are supposed to work on an average 13 hours, but a large number of spare hands are kept, so they are free to come and go as they please. The women work by shifts, and the intervals of rest prescribed by the Factory Act are observed. The cotton season being only of short duration we deem it impolitic to apply the Act to ginning factories and presses. For the same reason we consider it inadvisable to prohibit the employment of women at night. Male labour is most difficult to procure at this time of the year. We know of no valid objection that could be raised to prescribing the fencing in of shafting being made obligatory. Women are not employed in front of the opener in this factory We know of no case in which stones have been hurled out from the opener If the *kapas* is well spread out before passing through the opener, fires can be minimised: the most prolific cause is the sulphur match. During the last five years one serious and four minor accidents have occurred in this factory. *Press Factory.*—John's Hydraulic Cotton Press employs 40 men only. The season is from 5th November to 5th March. The working hours average about 10 a day. The men are supposed to work during the time the press is running; but a number of spare men are kept, so they are free to come and go at will. No accidents have occurred during the last five years. *Cotton Mills.*—I represent—

	Men.	Women.	Children.	Total.
The "Agra Spinning and Weaving" Mills	464	68	48	580
The "John's Spinning" Mill.	501	76	72	649
The "Coronation" Spinning Mill	394	58	42	494
The "Princess of Wales" Spinning Mill ...	514	79	75	668
				2,391

I cannot go as far back as 10 years, as in 1900 the mill was destroyed by fire, and it was not until 1902 that we were in full work again. During the last *six years* the following is the number of days in each year the mill worked over 12½ hours *per* day:—

1902.	1903.	1904.	1905.	1906.	1907.
307	307	282	300	302	307

Taking the whole of any one year, the daily average working hours are 14½ hours or thereabout. Statistics of production for varying lengths of day are given below:—

Working day.	Production.	*Per* spindle.	Waste.
15 hours	12·57 oz.	·838	·50
12 hours.	10·69 oz.	·855	·50

The above is for 10s. mule yarn; we do not spin 20s.

A certificate of physical fitness should be granted when the child is passed for employment, and might be part of the certificate then granted, and no certificate for employment should be given unless the child is in a fit condition to work in a textile mill. The same should be done when applying for a full-time certificate. To prevent half-timers from going as full-time workers at other mills, a certificate should be given to each, showing in what class they have been passed and also that they are physically fit, and this should be produced before employment is given. I do not consider it is necessary to create a "young person" class. If it is done, a very large proportion of our full-time workers will come into this grade. The present system works well, and with a supervision of fitness added will not be detrimental to health. It would be best to allow each individual employer to fix the hours that best suit his district, but to fix a certain number of hours that shall not be exceeded. It is not necessary to bring inspectors from England, but they should be men who have some knowledge of machinery and of manufacturing generally, and should only be appointed after passing an examination. A stringent law is not at all necessary, as the workmen would never adhere to it, they prefer the go-as-you-please longer hours. The average man does not work more than eight hours, as he is in and out for smoking, for his food, &c., many times in the day, irrespective of the half-hour rest allowed, and on this account more than 25 *per cent.* hands are employed. It is to the interest of employers to provide houses for their work people. If this is not done they are very liable to reside with friends or relatives at long distances from their work, entailing long walks morning and night, which leaves them unfitted for work in the morning, and makes it very late before they can get their evening meals.

Oral evidence.

Witness did not think that any restriction of working hours was required. In the hot weather his books showed that the mills were working from 5-30 A.M. to 9 P.M. This only meant that the engine was running for that time, and not that the men were working all the time. As a matter of fact, extra hands were employed in order to allow the operatives to arrange a system of shifts amongst themselves. He strongly objected to any legislative interference with adult working hours in India. There was no such thing in England There were trades union in England to regulate hours, but he did not wish to see such organizations in India. He considered that if the working day were shortened, the men would, if possible, work elsewhere at night in order to earn still more money. Unless the men could earn a sufficient sum of money they would not work

in the mills. His mills always worked from daylight until 9 P.M. He had never attempted to estimate the amount of time wasted in the compound by the operatives, but he felt sure that even if the hours were restricted the managers could not be stricter with the men. Adult labour should not be interfered with because labour in Agra was more expensive than English or Bombay labour. If the Commission, however, fixed a definite working day, the owners could not object. It would mean that the operatives would not earn so much. Some time ago they tried a twelve hours' day, but there was a tremendous falling off in the output. The mills lost nearly one-fifth of the output, and the men complained that they received less wages. He was obliged to return to the old system. There was no scarcity of hands, and they arranged a shift system among themselves. His workers were chiefly of the *kolhi* or weaving caste, in addition to some hands from Cawnpore. He considered that his employés were as strong as those in outside employments, and he had never heard any complaints that the long hours were exhausting. The operatives did not work the long hours during which the engine ran. It took over one hour for the mill to get settled in the morning, for example. If the Indian workmen were as attentive as the British workmen, then a ten hours' day would be sufficient. He did not think that in the longest day the operatives individually worked more than ten hours. In proportion to the output and number of hands employed, they paid more in Agra for the work done than in Bombay. The Bombay hand dealt with a better quality of cotton, and was a superior workman to the Agra operative. Witness did not think that the Agra mills would pay with a 12½ hours' day. He estimated that there were always 15 *per cent.* of absentees. The men took three holidays a month over and above the weekly holiday. For the month of November they would be paid between December 27th and January 3rd. There was always a great deal of drinking after they received their wages The operatives earned a higher rate of wages than the ordinary workman in Agra city. Witness had built houses for his work people, and he helped them by advancing them money. He also treated his European staff generously. The average working day of the Agra mills was 14½ hours, and he would not object to a fixed 14 hours' day. A 12 hours' day could only result in a loss to the mills. If they could get a better quality of cotton then perhaps a 12 hours' day could be made to pay. The Agra operative was a dull man, and did not do as much work by 25 *per cent.* as the Cawnpore operative. He employed Cawnpore men almost exclusively in his Coronation mill. He objected to the proposed young persons class, as the mills would suffer owing to the difficulty in getting adults to fill up the vacancies. A restricted day for young adults would be good for them personally, but he would have to get adults to take their places. An attempt to provide education had been a failure, as the children would not come. The children of that class were not educated, as a rule. Witness did not object to a standard of purity of air. He was paying attention to both ventilation and humidifying. He had had electric light since 1887, and they had always worked until 9 P.M. without any objection from the hands. He had never had a strike among the mill hands. He worked his flour mill day and night by means of two shifts. His ginning factory was under the Act, but some ginning factories were not. He would bring all ginning factories under the Act, irrespective of the time they worked. There would be no harm in doing so. He had worked his ginning factory for 18 hours by shifts, and was of opinion that shifts could always be arranged for this work. If the working day were restricted to 12 hours he should work his mills for 18 hours by two shifts. Working for 12 hours only would result in a loss. He was already making arrangements to work an 18 hours' day by two shifts, should the 12 hours restriction be imposed. He was prepared to pay higher wages to obtain the hands necessary for the night shift. Witness had in his employment three Europeans, who had come to erect certain machinery. They were under contract to work only 54 hours a week, but when offered an extra pound a week, they worked very long hours, and on Sundays, without grumbling.

Mr. E. John.

Witness No. 117.

Mr. G. Thornley, manager of John's Mills.

I do not consider the physique of the workers has suffered from long hours. A day of 14 hours actual running time would in my opinion be sufficient. In our district we do not get this all the year round. It is necessary to stop 30 minutes between 12 and 2 for engine purposes. This I consider sufficient as the work-people do not have any fixed meal times, but get food at all hours of the day. With a working day limited to 14 hours the "young person" class would not be necessary. The women in our employ leave work at sundown in winter, and 6 o'clock in summer, as our reeling rooms do not have electric light installations. The minimum age of 9 years for children is correct in some cases, as all children are not alike: some are fit at that age, whilst others are not. Certificates of physical fitness should be granted before employment. Both full-time and physical fitness certificates should be obtained before employing them full-time. The present Factory Act provides for their employment in sets, and is quite sufficient safeguard. Compulsory education of half-timers at the expense of employés is not necessary. Government are providing educational facilities sufficient for the needs of the class from which our workers come. It is impossible to prevent non-working children being brought into the compound, but we do not allow them in the mill. Mothers are allowed to have their young ones in the compound, but on no account must they take them into any room where there is machinery.

Mr. G. Thornley. *Written evidence*

Ventilation, and purity of air and water, are well looked after by the medical authorities, and do not call for any further attention. It would be difficult to fix a moisture limit, cotton and climates vary so very much. The present standard of latrine accommodation is sufficient, any increase would only encourage the lazy ones. Urinals are separate. The Fire Insurance Companies generally see that doors are in working order, and the factory inspectors see that sufficient means of escape are provided. Fencing is quite sufficient, most accidents occur from the work-people deliberately removing fencing whilst the machine is in motion. All mills should be dealt with alike as to number of working hours, but should be allowed to fix their own starting and stopping times to suit the needs of the district. Full-time medical officers would be better than

Mr. G. Thornley.

the present system, as they would get more in touch with the special needs of each district, and would become better able to judge than the present officer who is daily occupied with other duties, and only pays visits occasionally.

Oral evidence.

Witness stated that an attempt to be stricter with the operatives had been unsuccessful, and the introduction of the ticket system resulted in a strike. The men said they would not work in a prison. He considered they were out 30 *per cent.* of their time. The Agra hands were out of the mills during working hours much more than the Bombay or Ahmedabad operatives. They drew their hands chiefly from the agricultural classes, who objected to have come to their work at the sound of the whistle. There was a gradual improvement as they became weaned from the land. This improvement was chiefly noticeable in the generation born in mill employment. They were more attentive to their work than the new men. Witness did not consider that the hours in the hot weather were exhausting and the men worked them without ill results, because they went out as often as they liked. He did not believe that with a restricted day they would get as much work proportionately out of the men. About three years ago they stopped at seven o'clock owing to the small crop of cotton, and they could not get a higher proportionate output. There was no improvement in the work. He disapproved of the "young persons" class, because the child of 14 was quite capable of doing the work that he actually did do in the course of the day's work. Unless they could get extra adults the hours of the "young persons" would determine the working hours of the mill, but he thought they would be able to get the extra adults. He considered that the Agra hands were slack because the industry was comparatively new to the district. The hands had to be constantly overlooked. In the Agra mills the children were not kept beyond their legal hours. Three years ago the Cawnpore men employed in Agra tried a strike, and wanted to stop at seven o'clock, because they said that the Cawnpore mills stopped at that hour. The Agra men did not join in the demand, and he refused to give way. They always had a lot of trouble with the Cawnpare men. The work people had never objected to the conditions of work in the long and hot days. He considered that the Agra mills would have to close if a twelve hours' day were enforced. Their only alternative would be to work for 18 hours by two shifts, and it would pay them to do so even if they had to work the night shift with adult males. His personal experience was that the Bombay and Broach hands were much more attentive to their work than the Agra operatives. The Bombay man would do as much work in two hours as the Agra operative in three. The production in Agra dropped off at night, when there was also more waste. He estimated that they ought to turn out three quarters of a hank more than they did between the hours of six and nine. They did nine hanks a day, seven and a half of which were turned out in twelve hours. After six o'clock the supervision was not so good, and the output decreased. The Europeans left at five o'clock for recreation, and returned to the mills at a quarter to nine in order to see them closed. In order to turn out as much work as they did they had to employ a large number of hands, more than was actually necessary for the proper running of the mills. They had nine men to each mule while Bombay and Broach would employ two men less. Although the machines did not stop, yet the continuous absence of the operatives meant greater waste.

Witness No. 118.

Mr. Otto Weylandt, carpet manufacturer, Agra.

Mr. Otto Weylandt.
Written evidence.

I own "The Agra Carpet Factory." It is not a factory within the meaning of the Factory Act, inasmuch as no machinery nor engine, nor artificial power of any sort is used The carpes. are made entirely by hand. The numbers of men, women, and children employed by me are as follows:—

Men	100
Women	50
Children (boys)	250

The manufacture of carpets has never been carried on for as much as twelve and a half hours a day. The duration of working time never exceeds ten hours, and in the winter is not more than eight hours, thus making an average of nine hours a day throughout the year exclusive of holidays. These working hours include breaks for recreation and food, of about one and a half hours daily, for every employé. The work is all done in the day time, and the factory is closed for the fourteen to sixteen hours between evening and morning. I do not think that the minimum age at which children are allowed to work in factories should be raised beyond nine, because native children are far more advanced in independence and ability to take care of themselves, and in general growth, than European children of corresponding age. In my factory their work it most healthy, and probably much more so than life in their own homes, for it is all done is practically open air, the sheds containing the looms being open on all sides. Any division of my boys into sets is quite unnecessary, for besides the one and half hour break for recreation above-mentioned, they are free to interrupt their work at pleasure, being paid each according to the amount of work he does during the day, a low minimum only being exacted. Each boy in employed individually and directly by me myself, and none through any intermediate contractor. I do not think that factory owners should be obliged to provide elementary education at their own expense for children working in their factories. In the first place I cannot see why they should be expected to do so, and to accept the extra hindrance to business which the additional expense and trouble and difficulties of this burden would impose upon them. The only practical effect of such an obligation would, in my opinion, be to frighten enterprise and stifle industrial undertaking. Besides that, such education carries in itself inherent disadvantages to all employers of labour, and, far from being a benefit to the children themselves, it only incapacitates them for earning their living. A smattering of primary education has the solitary effect upon native children of the working classes of making them think themselves too superior for any manual labour, for which alone in this country there is extensive demand, and which alone can offer them a livelihood.

(I am not speaking of individuals but of the general masses). Thus, in my opinion, primary education of the children of the labouring classes is as yet long before its time in this country, and is not only not an advantage, but is most undesirable both for employès and employers. It throws the employé out of work, because he will not do manual labour after being given primary education and it makes it more and more difficult for the employer to obtain the labour of which he stands in such need. On the other hand, I am strongly in favour of technical education for boys, for that brings them increased power of earning in whatever work they acquire skill, and renders them much more valuable hands to their employers, and is, in fact, on the side of both employers and employed, a help to business and a direct impulse to increased prosperity. In this respect I think I may justly consider my factory to be an educational establishment in itself. The circumstances of the industry in which I am engaged are such that it has hitherto rightly not been brought within the operation of the Factory Act, and I claim that it should continue to remain outside the sphere of the Act, because, as before stated, no machinery, nor engine, nor artificial power of any sort is used in it, and the work is carried on in the most healthy circumstances and under the easiest conditions. In respect of my industry there is the following matter which I particularly desire to bring to the notice of the Commission: it is the unfair competition in carpet making of Government jails and of missionary societies. The jails employ forced labour, and thus in making carpets have no labour to pay for, and are consequently able to sell them at rates at which no private factory can make a reasonable profit, and they do so. This, I submit, is an injury both to factory owners and to carpet factory hands. I believe that the desire of Government is to promote this industry as well as all others; but this unfair competition with private enterprise, by means of forced labour, instead of doing so, seriously hampers it. My complaint as to missionary societies is identically the same. They make carpets with forced labour, and thus compete on unfair terms with private industry, and actually forcibly prevent many employés, who would be paid for their work in private concerns, from earning the liberal wage which is their due. Mr. Weylandt.

Witness stated that he employed 400 hands, but would like 1,000 if he could get them. His factory did not come under the Act, as he used no power. It should not, of course, be brought under the Act. A young boy, unskilled, earned one anna a day for the first five or six months. He was then put on piece-work, which brought him in not less than 3½ annas daily, and he could earn if he liked four or 5 annas, and in the long days as much as eight annas. The men were paid a monthly wage of Rs. 8, but if they read quickly, and assisted the boy to make his carpet in good style, then both the boy and reader earned more money. The women were employed in spinning the yarn. They were old women, and earned about 1½ annas a day. He could obtain plenty of women at that price. Originally he started his factory with jail birds, but did not now employ them. He found it difficult to compete against the jails and missionary societies. There was an increasing demand for Indian carpets, chiefly from America and the Continent. He employed for the most part people of low caste, but not sweepers. *Oral evidence.*

WITNESS No. 119

Lala Motiram Nanabhai, Agra.

I am manager of Heera Lall Chunni Lall's ginning factory, Agra. It employs 72 men, 58 women and no children. The working season is from October to March. A more accurate period than this cannot be given, because the working of the factory depends entirely on the *kapas* crop. 6 a.m. to 6 p.m. is the usual working time. The operatives work for twelve or fifteen hours, and two or three hours are given to them as an interval of rest. I do not approve of the proposal to bring my factory under the Factory Act, and to work for about three months only. Women are not allowed to work during the night. I don't think it advisable to bring the ginning and pressing factories under the Factory Act, because the factories do not work all the year round, but only for a few months, *i. e.*, as long as the cotton season lasts. Shafting should be fenced, and it would be much better if it were cased in between the drums. Women should not be allowed to work in front of the opener. To prevent the hurling of stones from the opener, which often occurs, the *kapas* should be first laid down and looked over on the floor, and then it should be brought to the opener. And to prevent fire accidents there should be a water connection close to the opener. Two men were injured in my factory during the last five years, but as they were soon sent to the city hospital both of them were cured by the Civil Surgeon. Lala Motiram Nanabhai. *Written evidence.*

Witness stated that he had 44 gins; the women arranged the reliefs among themselves. They usually worked twelve hours, but occasionally fifteen in a busy season. The gin seldom worked for long periods, and when they did work for eighteen hours he employed men to feed the gins. The *jamádár* made all arrangements for women relieving one another. He had an opener, but no women worked in front of it. There had been a few accidents from fire during the past ten years, but none were serious. *Oral evidence.*

WITNESS No. 120

Major H. Austen Smith, I.M.S., Civil Surgeon, Agra.

Regarding the main points referred to the Factory Labour Commission, it is my experience of adult male operatives that, although the hours are long, they never work continuously all the time, but at intervals they go outside the factory work rooms for rest or food, and that generally the physique of operatives has not been affected by long hours. Of course if men really were to work continuously, which they never will do, I consider that working hours of from 5-30 or 6 A.M. Major H. Austen Smith, I.M.S. *Written evidence.*

Major H Austen Smith, I.M.S. *Written evidence.*

to 6 or 6-30 P.M., with half an hour's interval, should be the limit. I do not think it advisable that women should be employed at night. I do not consider it necessary to raise the minimum age of children working in factories above nine, but I think that certificates of the physical fitness of children to be employed should be insisted on, chiefly as regards the lungs and heart being sound. Regarding the ventilation of factory work rooms in cotton spinning factories, where my experience has chiefly been obtained, it appears to be impossible, owing to the humid atmosphere necessary for the work, to keep the windows open when the air is dry, and for this reason I have generally found these rooms on my inspection to be hot, stuffy and ill-ventilated. I think some method of purifying the air should be adopted in all such factories. I have no experince of humidifiers, and do not know whether they are satisfactory or not for this purpose; of course it stands to reason that it is not so healthy working in hot and ill-ventilated rooms as in well-ventilated ones. I have always found that latrine accommodation of one in 40 or 50 has been sufficient for the factory operatives, for males, females, and children generally live in lines or in their own homes, and use the latrines outside before entering the factory. Separate urinal accommodation should be insisted on. Regarding the questions for medical witnesses, I have had more experience with operatives working in cotton factories than any others, although my experience is limited, and I am unable to give statistics showing the relative healthiness of these operatives, as compared with the general average of the non-factory population of the same class. From general ideas I have formed on the subject one cannot of course compare the healthiness of these operatives with people working in the fields and open air all day, but there is little difference between them and others of the same class working in rooms in the cities. I consider the factory population to be generally of about the same average physique as the same class working in the cities, although they could not in either case generally be called robust. I have in my experience not found these operatives to suffer more than the general population of the same class for any specific classes of diseases. One would expect mill operatives to suffer more from lung diseases, but I have not found this in my experience, although I cannot give any statistics one way or the other. I can speak with some authority on this subject, as I have been in medical charge of four large cotton mills in the city of Agra for the last nine months. The most suitable method certainly of determination of the age of any particular examinee, in my opinion, is by the appearance of the teeth, although general development, hair on the pubes, armpits, &c., may be taken into account at the same time, but age can only be estimated with any degree of certainty in the young. The dentition test can be relied on in India, in my opinion, but where there are exceptions these are mostly on the precocious side. In my experience the average ages at which the permanent teeth appear in Indian children are as follows :—

(*a*) Central incisors	the 7th year
(*b*) Lateral „	8th to 9th year.
(*c*) Canines	10th to 12th year.
(*d*) Anterior bicuspids	9th to 10th year.
(*e*) Posterior bicuspids	10th to 12th year.
(*f*) Anterior molars	6th to 7th year.
(*g*) Second molars	11th to 12th year.
(*h*) Posterior molars	15th to 25th year

It is not my experience that the existing law as to the employment of children in factories is evaded. I have made many medical inspections of factories at unexpected hours and dates, and have always gone carefully into this matter, and have never found any evasion of the law. The factories I have been connected with have always in my opinion erred on the side of extra care in employing children well over the limit age and only those physically fit. I can only give my general experience in the matter as I have collected no statistics. Generally it does not seem to me necessary to have whole time medical inspectors. My experience has been in the United Provinces, and it is certainly not necessary there, where excepting at Cawnpore the mills are few and scattered. The Civil Surgeon has carried on this work since the mills started, and I think the necessary inspection work has been carried out honestly and thoroughly. I consider the standard for latrine accommodation suggested one seat for every 25 persons to be ample.

Oral evidence

Witness stated that he had had nine months' experience of cotton mills and ginning factories in Agra, and he had also had a few weeks' experience in Cawnpore. In his opinion agricultural work was not so unhealthy as mill work, and he considered that the cultivators, as a class, were stronger than the mill operatives. Witness usually made his inspections in the morning. He considered that the hours worked in the Agra mills in the hot weather, from 5-30 A.M to 9 P.M., were too long. He thought, however, that the mill operatives compared favourably in health with labourers and others who worked in the city. They had also to remember that the men did not work continuously. If they did, then they could not work such long hours. In the course of his inspections he had always found men idling, but he had no specific figures on the subject. Even if the operative did idle for some part of the total time, yet the long hours referred to would necessarily prove exhausting. He would not describe the Agra mill operatives as a drunken lot, and he had not yet seen a case of phthisis amongst them. If he had a crowd of Agra workpeople placed in front of him he would be unable to pick out the mill operatives, who were not deficient in physique. In the course of his inspections he had nearly always reported about the bad ventilation of the mills. The operatives did not appear to be affected by this, but witness could not help noticing the vitiated atmosphere when first entering the particular room. Witness only visited those ginning factories which were under the Act. At Ferozabad only two out of five gins were under the Act. He received his instructions from the Collector, and his reports went both to the Collector and to the head of the mill. He never received any intimation that his recommendations had been attended to, and he had to rely on his next visit on the notes he had made during his former inspection. He inspected mills and factories once every three months. Witness had never found the latrines crowded, but he would like to see separate urinals provided. The number of latrines required depended upon the way they were cleaned. The better they

were cleaned the smaller the number required, and in Agra the cleaning was well done. He would insist upon the certificate of physical fitness for children, and he thought that such a certificate would be a good thing for the young adults also. It was advisable to state in regard to a boy of 14 whether he was capable of doing a full day's work or not. The half-timers came to his office for inspection. He had noticed old men working in the mills. He was able to pass almost all the children sent up for examination. He had not heard that the operatives had to take frequent holidays in order to preserve their health. He thought that 12 hours was the longest period that a man should work in any one day. He would insist upon a standard of purity for air in mills. He agreed that breathing the dust laden air of ginning factories was harmful. He wanted the physical fitness certificate for young adults to prevent those suffering from lung troubles from entering the factory. That was a danger to all the other operatives. He had no other reasons to urge for introducing this physical test, only a very small proportion would be excluded. It would be advisable to exclude from the factory every person suffering from consumption.

Major H. Austen Smith, I.M.S.

ALIGARH.

Witness No. 121.

Lala Gobind Ram, of the Gobind Ram ginning factory, Aligarh.

Lala Gobind Ram. *Oral evidence.*

Witness stated that he had two factories, one contaning 40 gins and the other 25. He had no press. The 40-gin factory worked for 18 days last year, with two shifts from 6 A M. to 6 a.m. with one two-hours' rest each day, 102 women were employed in the two shifts. The 25-gin factory worked in the same way for 12 days. 56 women were employed then in the two shifts In the present year the 40-gin factory has worked with two shifts for 17 hours a day from 4 A.M. to 10 P.M. with 84 women. When any of the workers cared to go out their places were taken by members of their family. The double shift arrangement was actually in operation, and workers were not allowed to work in both shifts. The women were paid two annas and-a-half for the day shift and three annas for the night shift. They received three annas for the present working day of twelve hours. Male adult labour was provided by contract and the men were paid from four to five and-a-half annas a day according to the work they did. The Factory Act was applied to his ginning factory, and he employed no half-timers. The doctor always examined any young full-timers about whose age there might be any doubt. It would be a great hindrance to the work if women were prohibited from working in gins at night, as it would be impossible to obtain a sufficient supply of male labour. He saw no objection to the Act being applied to gins in regard to engines and boilers, but did not consider it right that it should affect labour. Also, very often the owners of the cotton brought young children into the compound to help in the handling of cotton, and it would be hard to make the owners of gins responsible for their being there. Ginning labour ought not to be under the Factory Act because it was not trained labour like that in cotton mills. Witness did not object to the principle of one holiday in seven days, but would prefer to be allowed to take all four days at one time during the month. They could then clean the boilers and engines. Now they had a weekly holiday, in addition to festivals, and then they had to stop for three days to clean boilers, which in a time of pressure meant a great loss. There was no danger from the line shaft except to those men who had to attend to the belting. Otherwise the shaft was well protected, and out of the way. No females worked in front of the opener, and only one man had been injured while working there. The children who were employed in the compound were between the ages of ten and fourteen. Occasionally there was a stoppage of the engines, and then they worked for fourteen hours or more to make up for lost time. The Factory Act had only been applied to his factory during the last five years. They had a pool in Aligarh and charged six and a half annas a *maund* for ginning, with a rebate of half an anna. Of the amount one and a half annas went to the joint combination. The people employed were of low caste, and were not cultivators.

Note.—The witness did not submit written evidence.

Witness No. 122.

Mr. Mohammed Yusuf, of the Narsingdas Mohammad Yusuf cotton ginning and lime mills, Aligarh.

Mr. Mohammed Yusuf. *Oral evidence.*

Witness stated that he had not sent in any written statement, but he agreed with the written evidence of Mr. Grabham. He had 32 gins; his factory was a new one. It had only been working one day that season. Last year he had 18 gins, and worked from 5 a.m. to 8 or 9 p.m. He employed one shift, together with spare women and the relief afforded was such that no worker worked more than eight or nine hours. Witness had never worked with two shifts. He could see no injury arising out of the application of the Act, except that he would have to prohibit the owners of cotton from bringing children into the compound. These children sorted out the cotton and helped in various ways. There were eight ginning factories in Aligarh, and the Act applied to seven of them. Witness' factory was not under the Act, but it was not yet completed. When it was completed he would have to conform to the Act. Females were paid from two and a half to three annas a day. The working hours were continuous, and there were no formal arrangements for shifts. If females were prohibited from working at night, there would be great loss to the industry. Before the ginning factories were started the people ginned all night in their own homes, when there was a press of work, and now if they were not allowed to work in the factories, they would only be grinding grain for money at home.

Witness No. 123.

Lala Sarautilal, of the Lallamal Hardeodas ginning factory, Aligarh.

Lala Sarautilal. *Oral evidence.*

Witness stated that he had not sent in any written statement. He preferred to give oral evidence only. He had 52 gins, and this year they were working from 6 a.m. to 6 p.m. In a good season, if there were a pressure of work, they worked all night with two shifts, allowing one hour's rest for food, etc. If he worked over twelve hours with one shift he always arranged to have extra hands to act as a relief. His factory had been running for three years, and was under the Act. He had no objection to the Act, but thought that rules applicable to the special conditions of a particular place should be made by the Collector. He objected to the Act being applied to the compound where the cotton was stacked, as the owners brought children into the compound, and the owner of the gin could not be held responsible for their presence. He had had no accidents in his factory. If the employment of females at night were prohibited, it would practically amount

to having to stop all work at night. He could not get men to do the work. There were now eight factories, and it was impossible to obtain a sufficient supply of adult male labour for all. If there were only one or two gins then they might be able to work with men at night. Lala Sarantilal.

Witness No. 124.

Mr. Jamasji Pallanji, engineer of the Alliance Ginning and Pressing Factory, Aligarh.

I represent the Alliance Ginning and Pressing Factory, Aligarh. In ginning we usually employ 69 women and 37 men, exclusive of engineering staff. The engineering staff is engineer, one; engine driver, one; fireman, one; coalmen, two; oilmen, ten; roller cutters, three; carpenter, one; blacksmith, one; fitters, six; sweeper, one; bhishti, one. In the press forty men, exclusive of six men of the engineering staff, are employed. No children are allowed or employed in our factory. The working season is usually from the middle of October to the end of March. Below we give a statement which will show the number of days on which our factory worked during the last five years:— Mr. Jamasji Pallanji. *Written evidence.*

	Number of days factory worked during the last five years.														
	October.		November.		December.		January.		February.		March.		Total of days.		
	In day only.	Both day and night.	In day only.	Both day and night.	In day only.	Both day and night.	In day only.	Both day and night.	In day only.	Both day and night.	In day only.	Both day and night.	Of days only.	Both day and night.	Total.
Season 1903-04 ..	7	...	9	16	5	...	12	...	4	...	...	...	37	16	53
„ 1904-05 ..	5	12	...	24	...	24	2	9	12	.	6	...	25	69	94
„ 1905-06 ...	14	7	...	23	5	14	9	...	...	...	...	...	28	44	72
„ 1906-07 ...	4	...	6	16	10	11	14	...	...	...	...		34	27	61
„ 1907-08 ...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	1

During this year 1907-8 our factory worked one day only, *viz.*, the 21st October 1907, and remained closed on account of the slack season. The working hours are:—From beginning of season to middle of October, 5 or 6 A.M. to 6 or 7 P.M.; from mid October to end of November, twenty hours, when work is carried on by shifts and double staff; from the beginning of December to the end of season, 6 a.m. to 6 p m. The average hours worked are from twelve to fourteen (except in the case of women). The engine is usually stopped after every six or eight hours for about half an hour for oiling machinery; in addition to this the employees are allowed about half an hour for eating, drinking, smoking, &c., and it is customary with all the factories to employ extra hands to allow of this, for it is impossible to keep any employee steadily at work for a certain number of hours. In the case of women their absences are even more frequent, and they are often relieved by other members of their family for hours at a time, it being customary for the husband or other member of the family to take their turn in the day's work. Personally, I do not consider that any ginning mills should be brought under the Act, for the simple reason that they do not constitute factories in the strict sense of the word, as they manufacture nothing. The work requires no skill. Besides this the ginning mills work very irregularly, depending either on the contracts made between the merchants for the supply of cotton in a specified month, or on the notice of favourable rates from Bombay, when the mills have to work day and night. If the mills were brought under the Factories Act, they would require to observe holidays and working hours, which would be injurious to the trade in general, and the merchants and mill-owners would feel the loss bitterly. Cotton presses also should be exempt; only 46 employees are necessary, and it is rare for a press factory to work more than eight to ten hours daily. There is no possible objection to employing women at night; they work in gangs and inside the gin house only; if such labour is prohibited by law, it will deprive a large number of the very poor classes of their wages. Night work is rarely carried on; it is also usual to pay a higher rate of wages for night work. If women are prohibited from working at night, it is likely to entail a serious loss on the ginning mills, for the requisite male labour cannot be obtained. Both in the interest of the employees and employers, it is absolutely essential, if ginning mills and presses are to be brought under the Act, to make special provisions. Suggestions are:—General rules only should be indicated, and the Collector of each district should be empowered to make rules as indicated by the Act, in consultation with the owners and agents of the several factories, for local conditions in India vary so that rules cannot be made applicable generally. All ginning mills and presses should be exempt from the compulsory weekly holiday in these provinces, the average festivals are at least two or three days a month, the season is a very short one, employees are not regular in their attendance, and instead of the weekly holidays it would be far more in the interest of factories to make it compulsory to close for the last three or four days in each month, as this would then allow the necessary boiler cleaning and overhauling of machinery to be done regularly, which, as things are at present cannot be done, for if a factory closes for this purpose, it more often than not means great pecuniary loss, as a merchant will not wait for his cotton, and insists on the ginning being done without delay, or else takes it elsewhere, and work lost in this way can never be made up. Only the actual gin

Mr. Jamasji Pallanji. house, engine, and boiler house should be under the Act, as in all factories it is usual to provide sheds for cotton and *kapas* for the use of the merchants, who employ men, women, and children to pick over and sort the cotton and *kapas*. The factory owner or agent has no control whatever over these empoyees, and any attempt to interfere with them would mean the loss of work. No children of course should be employed in any part of the factory that contains machinery. In this factory the line shaft is fenced, and none except those employed on looking after the belting, or engineering staff, are allowed near the shafting; it would be impossible to case the shaft between the drums, except at considerable expense and great inconvenience to the factory. Women should not on any account be allowed at or near the opener, and it is not usual in these provinces so to employ them. I have never noticed an accident in my factory caused by stones being hurled out from the opener, or from fire; but as a precautionary measure it would be better to keep an ample supply of water, and to allow only a limited quantity of *kapas* near the opener. During the last five years only one fatal accident and two serious ones took place in this factory. A more liberal interpretation of the spirit of the Act by district officials is desirable. The appointment of a special technical inspector for each province, to whom all questions may be referred for decision, as regards any order passed by the local inspector, is also desirable. Such an inspector should be thoroughly conversant with the needs and requirements of ginning mills and presses, and should know what can and what cannot be done. It would be well if the boiler inspection were made by the first class engineer in charge of the mills, instead of by the Government boiler inspector, which causes much inconvenience and expense to the mill-owner, and takes some days in correspondence.

NOTE.—Mr. Pallanji did not attend for oral examination.

WITNESS No. 125.

Mr. Grabham, local agent of West's Patent Press Co., Ltd., Aligarh.

Mr. Grabham. *Written evidence.*

West's Patent Press Co., Ltd., have ginning mills at Agra, fifty gins; Aligarh, 45 gins; Chandausi, 74 gins; Etawah, 60 gins; Hathras, 60 gins; Kasganj, 72 gins. They have presses at Agra, Aligarh, Bewar, Cawnpore, Chandausi, Hathras, Kasganj, Delhi, Etawah, Fazilka, Saharanpur, Umballa, Amraoti, Bágalkot, Gadag, Guntur, Hubli, Bhiwani, Kheri, and Paniput. At press factories 38 to 40 men only are employed. At ginning factories the number varies according to working hours and number of gins. The company's rule is, for employment of labour—Working hours × number of gins ÷ $9\frac{1}{2}$ hours (being net number of hours a woman is allowed to work in a day).

Example—

15 hours work. 60 gins. $\frac{15 \times 60}{9\frac{1}{2}} = 94$ women.

Men labourers vary from 90 to 150 according to number of gins, exclusive of the engineering staff. No children are employed in any of our factories. The average number of employees *per* gin is $2\frac{1}{2}$ to $3\frac{1}{2}$, depending on whether *kapas* openers are used in the factory. The working season is about five months between October and March; during this period the factories usually have constant work from about the middle of October to the middle of December; after that date work is intermittent, and averages three to four days a week. In good seasons the season may extend to the end of April, with perhaps one or two days' work in each week. From beginning of season to mid October the working hours are from 5 A.M. to 6 or 7 P.M. From mid October to mid December, twenty hours. Work is then carried on by shifts and double staff. From mid December to end of season the hours on working days are from 6 A.M. to 6 or 7 P.M. The average is from twelve to fourteen hours (except in the case of women). The engine is usually stopped after every six or eight hours for about thirty minutes, for oiling the machinery. No fatal accidents have occurred under my management, and the few accidents there have been have all been of a minor character.

[The remainder of Mr. Grabham's evidence is identical with that tendered by Mr. Jamasji Pallanji, Aligarh. Witness No. .]

Oral evidence.

Witness stated that the Aligarh factory was under the Act, but the factory at Agra was not. He understood that some years ago their manager at Agra successfully appealed against the factory there being brought under the Act. The company's ginning factory at Chandausi was not under the Act. He considered that all ginning factories should be subject to an uniform arrangement. If the factories were not under the Act they would not be obliged to give the compulsory weekly holiday. The Sunday holiday was, in fact, the chief objection to the Act. They did not want the Sunday holiday in ginning, but would prefer instead three or four days all at once, which would enable them to get the boilers cleaned. Now they had to stop at least three days for that purpose, in addition to the weekly and festival holidays. He would also like to be able to take advantage of a slack ginning period for the four days' stoppage. Under the Act he understood they were obliged to stop one day in every eight days. In this respect the application of the Act hampered the industry. He had worked 22 hours with two shifts, but the average working hours now were fourteen, with one shift, extra hands being employed so that the women should not work more than nine and-a-half hours. If he worked over fourteen hours he employed a double staff. In a good season he always engaged a double staff at the outset. He found male labour plentiful, and the scarcity was among women. At night he employed both men and women, and they earned higher wages then. A man on night work received five and-a-half annas, and a women four annas at night and from three to three and-a-half annas for day work. His gins were double ones, and he paid the same wages for work at single gins as at double. Single gins were the easier to work. All the ginning labour was provided by contract, and he could not say definitely what

wages were paid. The women arranged the shifts amongst themselves, and he could not say whether they were actually relieved or not. The labour contractors were paid by the amount of production. There was no additional expense to gins through being under the Act, and he believed the same wages were paid in all gins. In his opinion the latrines were used, and they were cleaned daily. Witness thought that local authorities ought to have power to arrange rules to suit the special conditions existing in each place. He would give the Collector power to arrange the holidays to suit the convenience of local owners. There should be four days' holidays a month, but they should be all at once, and on fixed dates. There had been one accident at the opener through a man's *pagri* being caught in the cylinder. No half-timers were employed, but he had to allow children inside the compound, as the owners of the cotton brought them in. This might be contrary to the Act, but so far he had never been held responsible for it. So far as possible he tried to prevent these children from entering the compound. As a matter of fact, he had very little option in the matter, as the sheds were given over to the cotton merchants. He himself retained control over the ginning house. A register of attendance was kept. He confined his control to seeing that the labour contractor complied with the Act, but could not actually see that the women did not work longer hours than those laid down in the Act. He thought that the rate for ginning *per maund* was a little higher in the Bombay Presidency. The prohibition of women working in gins at night would hamper the industry seriously, and they would only be able to carry on night work at an increased cost. It was doubtful whether they could get a sufficient number of men for night work, and if they could do so, they would have to pay a higher rate of wages.

Mr. Grabham

Witness No. 126.

Lieutenant-Colonel W. Woodwright, I.M.S., Civil Surgeon, Aligarh.

Lieutenant-C
W. Woodwrig
Written evide

I do not consider that the average child of nine is equal to half a day's work; I would therefore like to see the age of children raised from nine to ten years before they are permitted to work. This would also be an easier age for all concerned to judge. Certificates of physical fitness should also be made compulsory. On several occasions children have come before me for age certificates, who were physically unfit, and I believe that such are sometimes put to work. With the exception of the Postal Press, Aligarh, and the cotton spinning mill at Hathras, all the mills in this district are for either ginning or pressing cotton. I am not in a position to supply the Commission with statistics, showing the relative healthiness of these operatives as compared with the general average of the non-factory population, but I have formed the definite opinion, as the result of my experience, that their health is not inferior, with the exception of certain respiratory diseases, and that they are a fairly well-developed class. The factory population of this district in my opinion is not below the general average of the same class as regards physique. I am not in a position to say positively that they suffer more than those in outside employment from any specific class of disease, with the exception of diseases of the respiratory system, such as asthma, bronchitis and nasal catarrah. The Civil Surgeon is not the medical attendant to any of the gins, and in consequence the mill population have not come specially under my observation, except when they come as out-patients to the district hospital. In the event of definite limiting ages being prescribed, the most suitable method for the determination of age, of general applicability, would be (*a*) examination of the teeth; (*b*) the general appearance and the physical signs of puberty; (*c*) a horoscope, and a vaccination certificate would also help. I consider the dentition test, taken into consideration with the general appearance and signs of puberty, to be of great assistance in determining age in India. In my opinion the average age at which the permanent teeth appear is as follows:—

Central incisors	7th year.
Lateral ,,	8th to 9th year.
Canines	10th to 13th year.
Anterior bicuspids	9th to 10th year.
Posterior ,,	10th to 12th year.
Anterior molars	6th to 7th year.
Second ,,	11th to 12th year.
Posterior ,,	17th to 25th year.

I consider that in this table any difference which may occur will be on the early side rather than on the late. I believe the existing law is evaded, not by employing children under nine, but by employing children under fourteen as adults. I have no statistics to prove this, but I can say that I have frequently found children working in the gins whom the owners tried to persuade me were adults, and gave this as their reason for not having had them certified. With regard to the appointing of whole-time medical inspectors, I can't say anything as regards the large towns, but in districts, such as Aligarh, I consider their appointment unnecessary, as the Civil Surgeon can easily find time to inspect the mills during his tours of inspection. The standard suggested by the Textile Factory Labour Committee for latrines is too low. One seat for every twelve persons should be provided instead of one for twenty-five.

Oral evidence.

Witness stated that he had to inspect a cotton mill at Hathras, and the gins at Aligarh and Hathras. The Aligarh gins did not work at night. He had seen no signs of deterioration in health among the operatives. He had seen no cases of phthisis, but some of the workers suffered from bronchial affections. He had noticed this among the operatives who attended the hospital. There was no evidence that the Hathras mill operatives were adversely affected in health through the long hours worked. He reported after his inspections to the District Magistrate, who took action if necessary. It would be better if the Civil Surgeon received an intimation in such cases stating that his recommendations had been attended to. Witness approved of raising the minimum age of children to ten, as he did not think that a child of nine was capable of doing half a day's work. He inspected the Hathras cotton mill four times a year. There was no second examina-

utenant-Colonel Woodwright.

tion for children before working full-time, and if a boy was over fourteen he was put to work without examination. Witness entered the probable age of the child on the certificate. He had seen children in gins, who in his opinion were under fourteen years of age, working as adults. Recently a ginning owner had been prosecuted and fined for illegally working half-timers over time. Witness' opinion as to age had never been contested. He considered that the latrines at Aligarh were well cleaned. He had seen operatives waiting to use the latrines, but it might have been merely an excuse for idling. He had to inspect other ginning factories at Atrauli, and they were conducted similarly to those at Aligarh. Those gins had always been under the Act. He had no statistics concerning cases of bronchial catarrah among gin workers, but he considered that these workers were more prone to such ailments than workers in outside employments. Ginning work, however, was only for four months in the year, and so there were no permanent effects upon the health of the operatives. So far as better ventilation was concerned, he could only suggest that the windows should be kept open as much as possible.

HATHRAS.

WITNESS NO. 127.

Lala Harcharandas Ramchand, Hathras.

I represent the Ramchand Hardeodass Cotton Spinning Mill Company, which employs 500 men, 50 women, 166 boys, 7 girls: total 723. We have been working over twelve and a half hours a day since January 1902. Lala Harcharan Ramchand. *Written evidence.*

Years	*Working hours.*
1901	11
1902	13·40
1903	13 40
1904	13·30
1905	13 37
1906	13·30
1907	13·30

We do not spin fine counts or waste, but from 8's to 16's only. The average production on 10's—

Hours.	*Mule.*	
11	0 87 oz.	Ring *per* spindle *per* hour.
12		
13	0·88 oz.	1·00 oz.
14	0·88 oz.	1·00 oz.

If working hours are to be restricted, a definite time limit should be prescribed for working, from 6 A.M. to 6-30 P.M. with half an hour's interval between noon and 2 P.M. Inspectors from England are not necessary, and men with a thorough knowledge of the working of Indian mills would be more useful. No elasticity should be allowed in the working of the law, otherwise it will be abused. Mill-owners should provide properly built houses for their work-people at special reduced rents. The Commission might kindly suggest to the Government that they should bring the canal into Hathras, at an early date, as the well water is extremely bad and ruins the steam boilers in three years. The present system of working hours is satisfactory, and there is no need of making any alteration in it, for the physique of the workers does not seem to be affected by long hours. The engine should stop between noon and 2 P.M. for half an hour. The shift system is preferable, in which case hours should not be limited. A special class of "young persons" is not desirable, because the majority of the work-people belong to the intermediate class, and if the hours are limited by law, the mill cannot be worked by adults without them. A special register should be kept if this intermediate class is made. Women should be prohibited from working at night. The age for children should not be raised above nine, but certificates of physical fitness and age should be required before they are employed. One month should be allowed to obtain these certificates. Certificates of age and physical fitness should also be obtained before a half-timer works full-time. Children should be employed in regular morning and afternoon sets. Factory owners should not provide elementary education for children working in their mills. Non-working children should not be allowed into dangerous parts of a factory, and this should be enforced by law. The present system of sanitation and ventilation seems satisfactory. A standard of moisture for air in factories is necessary. A standard for the purity of water for humidifying purposes should be prescribed. Latrine accommodation should be one seat for every twenty-five workers. Separate urinal accommodation should be insisted on. All doors should open from inside outwards. Further precautions for fencing in spinning mills are not required.

Witness stated that his mill was started six years ago. He had 21,000 spindles, 8,500 ring spindles and 12,500 mule spindles. He worked in the cold season from 6-30 A.M. to 8 P.M., and in the hot season from 5-30 A.M. to 8 P.M. The half-timers changed their shifts at 12 noon, and the mill closed for the interval from 12-30 to 1 o'clock. He had had electric light for the last four years; previous to that the mill worked only daylight hours. With the introduction of electric light there was an increase in the rates of pay. The half-timers received Rs. 3 a month and the full-time boys from Rs. 6 to Rs. 8 a month. He had to pay higher wages than in the Agra mills, because it was a new industry in Hathras, and the hands had to be trained. The women all left work at 6 o'clock at night, and never worked later than that hour. They were only employed in the reeling room, and after 6 o'clock the work was carried on by men. The long hours had not adversely affected the health of the operatives, and the workmen had never complained of the length of the hours. He considered that the men actually worked twelve hours out of the fourteen hours, and there were always from 10 to 15 *per cent.* of the hands in the compound. He employed extra hands to allow for this, and so the machines were never idle. The electric light working was not so good as in the day, and the decrease in the production by electric light amounted to from 5 to 10 *per cent.* compared with the production in the daytime. A fixed twelve-hour day would mean a decrease in production, and if a law were passed limiting male adult labour to twelve hours, then the industry would be injured. The hands would idle just as much if the working day were shortened. They spun only 10's and 12's the mill. The employés were *kolnis* and *chamars* from the Aligarh district. He had a few men from Cawnpore, and they worked better than the Aligarh men. The men made no complaints when the electric light was introduced but accepted the increased pay as compensation for the longer hours. The doctor came every six months to pass the children, and in the interval children were taken on and employed as half-timers until the doctor made his inspection. The certificates were kept in the office. Only a very small proportion of children were rejected as unfit. He intended shortly to introduce weaving. The working of the mill would be greatly hampered if they were not allowed to employ children until they were examined *Oral evidence.*

lala Harcharandas Ramchand.

by the doctor, as the latter only came once every six months. The doctor sometimes came for other duties and he then passed children also, but they could never be sure of his coming, except on two occasions in the year. The doctor only received a fee of four annas a child. The children were not examined again when they went on as full-timers, as the doctor entered their probable age on the certificate, and when they arrived at fourteen they were employed forthwith as adults. If a new applicant's age was doubtful he was employed as a half-timer until the doctor's arrival. He had had no fatal accidents in the mill, and the long hours in the hot-weather days were not exhausting to the men. It was extremely hot then, but the men stood the heat. He had no fans for purifying the air There was no dispensary in the compound, but he was building eighty rooms for his employés to live in

WITNESS No. 128.

Lala Saligram Antram, Hathras.

Lala Saligram Antram. Oral evidence.

Witness stated that he was the owner of two ginning factories and one press in Hathras. There were fifty gins in one factory, and 36 in the other. He had also one ginning factory and press in the Budaun district. His factories worked at present from 6 A.M. to 6 P.M., but when there was a press of work they worked for 24 hours, with two shifts of 12 hours each. At other times they worked with one shift from 5 A.M to 8 P.M., but when working these hours it was the practice for the male members of the family to come at 5 A.M. and work till 8 A.M. At the latter hour the women came and worked the remainder of the day, allowing the men to go to their work in the bazars, or elsewhere. The women received 3 annas a day, and sometimes 2½ annas for a 12 hours' day. He did not employ females on night shifts, because it was prohibited by law; men were employed at night. The wages were paid *per* gin, and he did not mind who worked the gin. He understood that it was not permissible to employ females at night, and therefore he did not do so. All the Hathras gins were under the Act, and they were hampered by having to give the Sunday holiday. Owners would prefer to close their gins, for four days all at once, in order that that stoppage could be utilised for cleaning the boilers. He employed twelve extra females for the 50 gins.

NOTE.—The witness did not prepare any written evidence.

WITNESS No. 129.

Lala Keshabdeo Gokalchand, Hathras.

Lala Keshabdeo Gokalchand. Oral evidence.

Witness stated that he was the owner of one ginning factory containing 44 gins, and one press. The working hours were from 5 A.M. to 8 P.M., but they did not work every day. He never worked longer than those hours, and had never worked at night. He had only one engine for both ginning and pressing, and the latter had to be done at night. The factory closed for the 1½ hour's interval for the women from 11-30 A.M to 1 P.M. The females arranged the reliefs among themselves. He did not keep an attendance book. The female labour was supplied by contract, and the women were allowed to rest when they pleased. His factory had been running for six years, and there had never been an accident. He had no opener. Ginning factory owners suffered no hardship owing to the application of the Act.

NOTE.—The witness did not prepare any written evidence.

WITNESS No. 130.

Babu Lal Kunj Lal, Hathras.

Babu Lal Kunj Lal. Oral evidence.

Witness stated that he was the owner of one ginning factory and one press. The factory had been working since 1906. He had 45 gins, and worked from 5 A.M. to 8 P.M. He had never worked for longer hours. He employed 12 extra hands in order that the women might be relieved when necessary. The first three hours of the working day were worked partly by extra hands, and partly by men The females came to work at 8 A.M. The advantage of being exempted from the Act was that they would be able to employ the hands for longer hours, and there would be greater profit. They had a pool of the ginning profits in Hathras. His gin and press cost him one lakh of rupees, and last year he made a profit of Rs. 18,000. He had not had any accidents in his factory.

NOTE.—The witness did not prepare any written evidence.

WITNESS No. 131.

Lala Sheomukhrai Mathrumal, Hathras.

Lala Sheomukhrai Mathrumal. Oral evidence.

Witness stated that he was the owner of one ginning factory and one press. He had 80 gins. Last year he worked from 5 A.M. to 8 P.M. He employed 70 females extra, above the usual complement. He objected to the application of the Act because it entailed the Sunday holiday, and also because they could not allow children in the factory. Even if the Act were abrogated they would still have to employ extra hands, as the operatives could not work efficiently for more than 12 hours without shifts. If extra hands were supplied, they could work longer, with an hour's rest at mid-day. He had a ginning opener, but it was not used. He had never had an accident in the factory.

NOTE.—The witness did not prepare any written evidence.

WITNESS No. 132.

Lala Piyari Lal, manager, Hathras.

Lala Piyari La
Written evide

I represent the Harmukh Rai Govind Ram ginning mills and cotton presses at Hathras, Khurja, Kosi, Palwal, Govindgarh and Alwar. At a press factory 38 men only are employed; at ginning factories the number varies according to the numbers of gins, and the working hours. We usually employ 50 women and 30 men at Hathras—50 gins—when our factory is working from 6 A.M. to 6 P.M. and when our factory is working from 5 A.M. to 8 P.M., we employ 40 men and 60 women, *viz.*, 20 persons for relief purposes. Women are more frequently absent at their working hours than men, and in such cases the members of their family relieve them. No children are employed on any part of the machines. The working season is about four months, from 15th October to 15th February. The working hours are 5 A.M. to 6 P.M. The average number of hours for men is twelve and for women eleven, and they all have intervals of rest twice, for half an hour, as our engine is usually stopped for oiling and cleaning purposes. There is no particular objection to bringing ginning mills under the Factory Act, provided it is made applicable to all ginning and pressing factories. In ginning mills the women should be employed from 5 A.M. to 8 P.M. by shifts, because in this Province there are too many ginning mills, and men are not obtainable, and the women can have no other means of earning the highest wages except in the ginning mills. If it is decided to make the Factory Act apply specially to ginning mills or presses, my suggestions are as follows:—

(*a*) General rules should be made by the Collector of each district, in consultation with the several factory owners, managers, and agents, as local conditions are so various that rules cannot be made applicable generally.

(*b*) No part of the factory should be deemed a "factory" except where the machines are working.

(*c*) No child should be employed on any machine for cleaning or any other process.

(*d*) Children should be employed for picking *kapas* in the compound by any *kapas* owner, and there is no need of any physical certificate and special register for them. In the compound the mill owner keeps several godowns for the use of their customers, and they employ separately men, women and children for their own purposes, with which the mill owner has no concern, or control over them, except to recover the ginning charges.

(*e*) Ginning mills should be worked day and night by shifts and double staffs.

(*f*) Women should be worked by shifts during the night

(*g*) Ginning mills should be exempted from the Sunday holidays, as the employees are not regular in their attendance.

New admissions are made daily by the contractor, and their wages are paid daily; they have full liberty to go to their houses at any time they like. No skilled labourers are required in these mills; beside this, in these provinces, the average festivals are at least two or three days a month, and also we have to close for three or four days in each month for washing our boiler, &c. The line shafts of the ginning mills must be properly fenced, but cannot be cased; no woman should be employed in front of the opener, and the way to avoid accidents at the *kapas* opener from stones or pieces of brick is to see that the feeder watches the cotton as he feeds it in. To prevent fire accidents water-buckets should be kept close to the *kapas* opener. No fatal accident has occurred in our factory. Cotton presses should be entirely exempted from the Act as they are working only a few hours in a day. No women and children are employed in presses.

Oral evidence.

Witness stated that he did not wish factories to be exempted from the Act, except to the extent that the weekly holidays should not be compulsory. They had to work their factories as the cotton came in, and it was also inconvenient to be bound by restrictions as to hours. Only that part of the factory where the machinery was should be under the Act, and the compound where the cotton owners stacked their cotton, and employed women and children to pick it, ought to be exempted from the operation of the Act. The work in the compound was not under the control of the ginning owner, who should not be held responsible for what went on there. Women ought also to be allowed to work at night When the crop was good they worked for 24 hours with two shifts. When there was this pressure of work it was essential to employ women, and any prohibition against women working at night would seriously affect the ginning industry.

WITNESS No. 133.

Mr. Uttamchand Munjal, B.A., manager of Messrs. Bankamal Hans Raj's Punjabi cotton ginning and press factories, Hathras.

Mr. Uttamchan
Munjal.
Oral evidence.

Witness stated that the gins and presses controlled by his company afforded employment to 75 men and 75 women. The gins worked from 80 to 120 days a year, and the working days of the press did not exceed 90. The ginning factories worked for fourteen hours a day, and the press for eight hours. No women worked for more than the legal hours, and there was a relieving set, which enabled half of them to go out and rest from 8-30 A.M. to 12-30 P.M., and the other half from noon to 4 P.M Witness saw no serious objection to bringing all gins under the new Act, irrespective of the time they worked, though there should be modifications in the general law if they were all brought under the existing Act. In his opinion there was no necessity to bring presses

Lr. Uttamchand Panjal.

under the Act. He saw no objection to women working on the gins at night, though it should be laid down that no woman should work more than eleven hours in the twenty-four. If women were prohibited from working at night it would entail serious loss to the ginning industry, especially as in times of pressure the work had to be got through quickly, otherwise the cotton would deteriorate in quality: night work on gins would not lead to deterioration in the health of the women, provided they were allowed good intervals of rest If all gins and presses were brought under the Act, he would suggest that the Sunday holiday should not be made compulsory. They should be permitted to stop for four days at one time, when the boiler could be cleaned. The term "factory" should only apply to those parts where there was machinery, and not to the compound. Very often the cotton owners brought women and children into the compound, and the owners of the gin ought not to be held responsible for their presence there. The Collector of each district ought further to be allowed, after consultation with the mill managers, to frame bye-laws suited to the peculiar conditions existing in each locality. The line shaft should always be adequately fenced. Women should be prohibited from working in front of the opener, which work could be done by men. In his opinion if a screen of strong gunny cloth was hung in front of the opener it would prevent accidents from the stones which were hurled out of the machine. During the last five years there had been two fatal accidents in the gins, one was the case of an experienced fitter who had gone to the shafting gallery to put leather belting on a pulley, and the other was a labourer who had no business in the machine room. It was presumed in his case that his *pagri* fell near the shafting, and the man tried to get it out Witness contended that in the United Provinces labourers were not overworked, and any further legislation was uncalled for. He thought that young children should be allowed in the compound, without medical certificates, to do light work, such as picking out the yellow cotton from the *kapas*. The children would earn moderate wages and help the family income. The present medical examination, and the payment of a fee of four annas before even light work could be done, were a great hindrance. The experiment of hanging screens of gunny cloth in front of the opener, where the *kapas* fell, had been adopted with success in all his company's factories They worked up to 8 P.M. by candle light, but he had given orders for an electric light installation. He had never received any complaints concerning the hours worked.

NOTE.—The witness did not submit written evidence.

CAWNPORE.

Note by Sir John Prescott Hewett, K.C.S.I., C.I.E., Lieutenant-Governor of the United Provinces of Agra and Oudh, for the Factory Labour Commission.

Government of the United Provinces.

THE inspection establishment for factories in the United Provinces consists of (i) the part-time services of Mr. Walsh, who is the Inspector of Factories in Bengal, and (ii) the District Magistrates and Civil Surgeons. It is wholly inadequate, and the Local Government has represented it to be so. The question of appointing a special inspector lies over till the report of the committee, although it has been recommended by the Local Government. There is no doubt that, although Mr. Walsh is a very competent inspector, he is not able to give adequate time to the inspection of the factories in these Provinces. I do not consider that the inspection of a factory can be adequately done, as a part of his duties, by the District Magistrate. To my mind factory inspection is a special work for which special training is required. Upon the question whether the factory inspectors should be recruited in the United Kindgom or, in the alternative, trained there, it is not easy to give a confident opinion. I have no doubt that it is of great advantage that the inspector should have had opportunities of observing the working of factories in England. On the other hand, there is a danger that on transfer from England to India he may be in too great a hurry at first and be led into mistakes owing to his not recognizing the essential differences, which are many, between the conditions in which factories are worked in India and in England. On the whole I should be disposed to recommend the adoption of both methods for the present, with the idea that ultimately the appointment of inspectors recruited in India but trained in England should be the method of recruitment to be generally followed. For these provinces we require one whole-time inspector and one whole-time medical inspector I think that the medical inspectors should undertake all medical duties, including the certifying of ages of children in factories; that they need not necessarily form part of the Indian Medical Service or the subordinate medical service, but that there would be no harm in their doing so; and that it would be of advantage that they should belong to the Indian Medical Service since such an arrangement would make them fit more readily into the administrative machinery. I am opposed to the idea that they should be permitted to take private practice. I think that it would be open to great objection to centralize factory administration throughout India and to vest the direct and supreme control in the Department of Commerce and Industry. I have the less hesitation in expressing a strong opinion on this point in that I have had the honour to be both the Member in charge of the Commerce and Industry Department and also the Head of a Local Government. I sincerely trust that no attempt will be made to appoint an Inspector-General of Factories to be entrusted with the duty of inspecting the different factories in different Provinces. The conditions of labour in one place in India differ very materially from those in another, and too rigid a system of conducting inspections is to be deprecated. I have visited mills and seen operatives at work in textile factories in Bengal, Bombay, Madras, the United Provinces, the Central Provinces, and Lancashire, and I have never seen a single symptom among the mill hands in India which led me to think that they suffer from over-work. On the contrary they usually look healthier and stronger than the general population of the class to which they belong. I had no opportunity of observing how the operatives fared when they were engaged on work for the long hours which were in force in the factories in Bombay in the autumn of 1905. I cannot help thinking that long hours such as these could not, even though the work of an Indian mill hand is far less strenuous than that of a factory operative in Great Britain, fail, if adhered to for any length of time, to have a very injurious effect on the operatives. I believe that the long hours which are followed, or, at all events, have been followed, at times in the jute factories in Calcutta and the cotton factories in Bombay have been to some extent brought about by what seems to me to be a pernicious system, namely, that under which in the former the agents of a mill are remunerated upon the gross outturn and not upon the profits, while in the latter those who financed the mills in their early days receive a rate of remuneration fixed at so much per pound of cotton cloth produced. These two factors point to outturn, not profits, as the object to be aimed at, and are productive of wasteful and uneconomical management. I wish that it had been possible for mill-owners throughout India to have combined and asked the Government to legislate so as to embody in an Act of the Legislative Council an agreement that they would only work for certain hours. I recognize the objections to the regulation of the hours of adult labour by law, and I fear that, if legislation is now undertaken to limit the working hours of adult males to twelve or to thirteen hours, it will not stop here, but that attempts will be made in the future—not always suggested merely by the idea of doing justice to the operative—to still further restrict the working hours of adult males. I am not sure that a limitation by law to twelve or thirteen hours would be popular with the operatives themselves, since it must lead either to the reduction of their earnings or to their having to work more strenuously than they do at present. If, however, mill-owners will resort to such hours as were in force in Bombay, with the mills open from 5 A.M. to 8 P.M. and the men working—not indeed continuously, but still in the mill—for 14½ hours in a climate such as that of Bombay, I see no alternative but for Government to legislative fixing the hours of labour. I believe that it is the case that in the Bombay mills during those long hours the operatives took intervals of rest varying from 1½ to 3 hours, probably in most instances being nearer the higher than the lower figure. I agree with the suggestion that the working hours of adult labour in factories should be fixed at twelve. I do not see any reason why a factory should not be opened at 5 A.M. in the hot weather, and should therefore be opposed to any legislation which would not permit a factory to begin work at that hour from the 1st of April to the 1st of November. On the other hand, in the cold weather in Northern India the opening of a factory at 5 A.M., which necessitates the mill hands, including the children, being about at 4-30, is objectionable, as this is an intolerable hour for children in the cold weather. I

The Government of the United Provinces.

should like to see the authorized hour for the opening of a factory between the 1st of November and the 1st of March fixed at 6 A.M. I was formerly of the opinion that it would not be desirable to create a class of "young persons," and my opinion was based upon the fact that young people are very early married in India, and that they ought to be treated as adults after the age of fourteen. I have modified this opinion and am in favour now of the creation of a class of "young persons" intermdiate between the half-timer and the adult. I am aware of the fact that the creation of this class may be inconvenient from an administrative point of view, but at the same time I do not think that the mere fact of its inconvenience should lead us to say that it should not be created. If it be decided that it is madvisable to create a class of "young persons," I would certainly advocate the maintenance of a special register of all workers under the age of sixteen in order to facilitate enquiries as to the physical fitness of the youngest adults to work full time. I am of opinion that the employment of women at night should be absolutely prohibited. I believe that it is uncommon at present, except in ginning factories, which are only at work at certain times of the year and where in consequence it is necessary to work at full speed. The presence of a woman in a factory at night leads her to bring her infant with her into the mill to sleep, and this is a practice which must be prejudicial to the health of these children and should not be contemplated by the law. I am not in favour of raising the minimum age at which children are allowed to work in factories beyond 9. I would require a certificate both of age and physical fitness before children are allowed to work in factories. Similarly, if a class of "young persons" be not created I would require certificates of both age and physical fitness for those who pass from half time to full time before they are permitted to work full time. I support the suggestion that children should not be employed except in regular sets, whether morning-and-afternoon sets or double sets. I think it essential that factory owners should be required to provide space for elementary education in their factories. I would require them to contribute towards the expense of such education, and would furnish aid towards these schools from Government. This is what we are about to do in Cawnpore. I should like to prevent non-working children from accompanying workers to dangerous or unhealthy parts of factories; but I fear that it would not be possible to enforce a rule of this nature, and, that being so, I do not advocate it. I do think it very necessary that there should be proper ventilation in factories in India. I believe that most factories are so constructed that they might be properly ventilated, but that the mill-hands will not permit the windows to remain open as intended. If samples of air were taken from factories in India they might or might not—I am unable to express an opinion of any value on this point—prove that the air was bad; but I do not believe you will get the mill-hands to help you in ensuring that its standard of purity shall be raised. On the other hand, if you interfere with their doing as they like in this matter they will resent it. This remark applies also to the idea of prescribing a standard of moisture for the air in factories with reference to the health of the workers. If such a standard is required for the manufacturing processes and can be secured without injury to the health of the operative, no obstacle should be placed in enabling the manager of the mill to obtain it. So far as I am able to judge, it would be a reasonable measure, from the point of view of the health of the operatives, to fix a standard of purity for the water used for humidifying purposes; but whether it would be easy to do so is a matter upon which I cannot express an opinion. I think it reasonable that the standard of latrine accommodation should be raised to one seat for every twenty-five workers, and that separate urinal accommodation should be insisted on. It should be prescribed that all doors of working rooms should be hung so as to open readily from the inside outwards to enable operatives to escape in case of fire. My experience does not lead me to think that further precautions for fencing machinery are necessary in any factories or class of factories. If the question "should arrangements be made to secure uniformity in the administration of the Factory Act throughout India?" means that a chief factory inspector should be appointed under the Government of India to insist on the inspections being rigidly assimilated in different Provinces, I am opposed to the proposal. I am strongly of opinion that full-time medical inspectors of factories should be appointed to assist the present inspectors in securing the due observance of the Act, and am thoroughly opposed to the present system, which imposes duties in regard to the observance of the Factory Act on the Magistrates and Civil Surgeons of districts. Factories are generally to be found in districts and centres where the work of the District Magistrate and the Civil Surgeon is unusually severe, and to my mind it is unreasonable to expect either of these officers to conduct the duties which are now imposed on them under the Factory Act.

Witness No. 134.

Mr. H. D. Allen of Messrs. Cooper, Allen & Co., Cawnpore.

Mr. Allen. *Written evidence.*

Before replying *seriatim* to the points referred to the Commission, I would like to give prominence to the following facts which call for special consideration:—

In the first place, the industry in which my firm is engaged, and of which we are the pioneers in this country, is carried out on absolutely different lines to any textile or milling industry. A very small minority of our workers are employed at machines, indeed less than 10 *per cent.* of our men are so employed, the remainder being employed on task work, and being at liberty to leave the factory when their day's task is finished. There can thus be no feverish anxiety on our part to get the utmost of its capacity out of a machine, to the disregard or detriment of its operative. We are business men and realize the importance of not overtasking our men. To do so would inevitably result in bad work. Secondly, we consider that any legislation restricting the working hours of adult labour would be an unwarrantable interference with the freedom of the subject. It has been hinted that the Indian worker is too ignorant or too timid to protect himself from an employer's greed, and must therefore be protected by Government legislation from the aggression of the employer. Our opinion is that the Indian worker, in the present state of the labour market, where the demand for workers is greater than the supply, is a most independent person; also that he has an instinctive desire to do as little as possible in an allotted time, and this, with his independence, are sufficient safeguards for him against his

employer, and against the physical deterioration with which he is said to be threatened. A further point is the fact that working hours of factories in this country are the direct result of the temperament or constitution of the worker, and of the effects of an enervating climate, and their length is more apparent than real. The manufacturer when founding his business in this country soon came to realize that the average Indian worker cannot be hastened. He is either disinclined, or unable, to achieve results, as a matter of course, by short strenuous effort, but greatly prefers to spin his task out to his own time. The result is the institution of hours, which to the home worker, able, and expected, to put in every ounce of his effort to each minute, appear long, but which are really far better suited to the Indian worker, and the climate he works in, than is the English Unionist labourer's eight-hour day. A the object of this Commission would appear to be the improvement of both the moral and physical welfare of the worker, I have no hesitation in saying that the surroundings in factories in Cawnpore are more likely to lead to this end than are the insanitary and unhealthy conditions prevailing in the local bazars. The working hours of adult males should not be limited. Adult male workers in England and on the Continent have full personal liberty as to the number of hours worked. Any interference with this liberty would be improper towards the worker, and unreasonable towards the employer. In no case has it come to our knowledge that a worker in a factory in this country puts in longer hours than he would of his own choice do in any other employment. Consideration should be given to the fact that, while in the factory, the workman is allowed certain periods of rest and relaxation for bathing, smoking, etc., which all tend to shorten his actual working hours. In my factory the workmen have no restrictions imposed in the matter of these periods, provided of course that they are indulged in reason, and the privilege not glaringly abused. There is not the least genuine desire on the part of the workers to have their day's labour curtailed, if by this curtailing their earnings are also diminished. The piece-worker wants no interference with his hours, but the labourer paid by the day would naturally pray for such interference. I cannot say whether the physique of workers would be affected by long hours, as we have never had the opportunity of testing this, not having ourselves worked long hours The ordinary working day in my factory (*viz.*, 10½ hours in winter and 11 hours in summer) is shorter than the petty employer in the bazar exacts from his operatives. Any factory legislation would not touch this petty employer, and if any benefit would be conferred thereby, it would come to the man who is already well treated in comparison with the other, who would still continue under the burden of unrestricted hours. Another point must not be lost sight of, and that is that by compulsorily limiting the working hours of a factory such as mine, which has often been called upon by a sudden stress of war to work at very high pressure for short periods, in order to meet emergent demands for war material, the interest of the State would be jeopardised. It has happened before this that on receipt of a sudden call for boots, saddlery and accoutrements by the War Department we have had to choose between setting aside other orders or working overtime. If the hours of work are limited by enactment the choice will then, under similar circumstances, lie between injuring our position with other constituents irreparably, or wilfully breaking the law. This is what I mean by such an enactment being unreasonable to the employer It would be improper to the employé to prevent his earning the increased wage that would come from longer hours on piece-work It must also be considered that the worker is alive to the fact that he is better treated in a factory than he would be by the petty bazar employer and "sweater." At the same time if his chances of earning a full wage were curtailed in the factory, he would be driven to the bazar where his condition, either moral or physical, would not be improved. If hours must be limited, I think that 12 hours of actual work should be the limit. This to exclude all periods during which the engine is stopped. The best method of enforcing the restriction would be in my estimation by the exaction by law of a fine, for each man worked beyond the limit I do not think that the law should specify the hours between which work may be conducted. Such restriction would, to operate fairly in all parts of the country and in all seasons of the year need to be so elastic, and the margin so great, as to render the limit inoperative or useless. I think that the engine should be compelled to stop for at least half an hour a day, so as to divide the working day fairly evenly, but I cannot even here express approval of a fixed hour for this stoppage. It may often happen that local religious feeling or other circumstances will compel an employer to close for the day at an earlier hour than usual, and in that case the fixed break at noon would affect him awkwardly. Latitude would, in any enactment, need to be given to an employer to meet such an eventuality. I think it would meet the case if it were laid down that no factory could work without a break for more than a certain number of hours. For this I suggest eight as the limit. I cannot admit that there has been illegal employment in factories of children between the age of 12 and 14, to justify the assumption that there has been physical deterioration The deterioration is, on the contrary, noticeable among children sweated and slaved in the cities and bazars, whom no legal protection can reach, and who, compelled by their parents or masters to earn a wage do so amid surroundings which the factory will save them from. I do not think that in this country there is a class of "young persons" in the sense accepted by the English Act. There are children, and once these reach the age of puberty, which it must be always remembered comes from two to three years earlier here than at home, they are fathers of families. If there is an intermediate stage it is a very short one, a year at most The adoption of infantile precautions for one who is permitted by law, and by the popular voice, and even coercion of his own class to be himself the father of an infant would be, I think, grotesquely inconsistent. It may be considered pertinent to enquire here what is calculated to become of the half-timer child who is turned out of the factory at the conclusion of his half day's work when neither of his parents can be with him? Would he not be in a better case if allowed to stay within the factory, even if at work, than be permitted to stray at will in the streets? The solution of this problem should lie with Government. I do not think that there is any need for a register of workers between the ages of 14 and 16. My reasons may be found above.

Mr. Allen.

I think the employment of women at night, even in shifts, should be prohibited. The moral reasons are obvious. The physical reasons are that the whole of the house work falls on the woman, the bearing, the rearing, and the care of the children, and the preparation of the meals, and no opportunity should be given for the employment of women in order to satisfy the greed for gain of the male head of the family. The present provisions of the Indian Factories Act are sufficiently protective as far as the limit of the numbers of hours (eleven) during which a woman may be worked, but it permits

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the employment of women at night under the shift system, and this should, in my opinion, be put a stop to. So far from thinking that the minimum age of children should be raised beyond nine, I think that their interests would be better served if their employment in factories, where they are far more likely to be well treated and in more sanitary surroundings than in the bazars, were permitted from the age of *eight*. I go beyond this, and though I am aware that the preponderance of opinion is against me, I consider that in India as a male child of over 12 is in his manners, customs and privileges treated almost as an adult, he should at this age be permitted the freedom of working full time as an adult. Previous to 1891, when the Indian Factories Act was amended, he was so permitted, and his employment as a half-timer was sanctioned from the age of seven. I do not think that these limits should have been altered, and I would urge their restoration; certainly the restoration of the maximum limit of 12 instead of, as at present, 14. I think a certificate of age should be obtained before a child is employed, but I am opposed to the proposal that certificates of physical fitness should be obtained at the same time as age certificates, prior to the employment of a child in a factory. It is quite reasonable that an inspector, seeing a sickly child, should be empowered to prohibit or to direct the discontinuance of his employment till he be fit again, but when the child is fit the employer should, equally reasonably, be able to demand that the certifying surgeon should examine the child, and if satisfied, should issue a certificate of age which would in itself be a certificate of fitness. I do not think it is really necessary to certify to the age of one who wishes to qualify as a full-timer, and who has worked as a half-timer. His age is easily obtained from the registers. Nor do I think that a certificate of physical fitness should be necessary. Common sense will dictate to employers that a child physically unfit will be an unproductive labourer. I do not think that it is necessary to prescribe for the employment of children in regular sets. I can only argue from assumed possibilities, as we have never tried working in sets, but I should say that it would be far easier for a greedy parent to work his child in two places on the same day under different names, if, by regular morning sets in the one place, and afternoon sets in the other, he were able to fit in the time at both places. A modified set system is bound to introduce itself if the working hours of children are curtailed below their present low seven hours' limit, but the employer should be given full latitude as to when and how he shall employ the child within the limits, so as to prevent his services being absorbed elsewhere in his spare time. Until the State imposes compulsory education of children on the people at large, I certainly do not think that the employer of labour on a large scale, who is already of great benefit to the country, should be still further taxed by being compelled to give education to the children employed by him. But as a matter of fact, most employers are alive to the value of elementary education for their half-timers, as the lad who knows how to read, write and figure, even in an elementary way, is more intelligent and therefore of greater value as a workman than the illiterate one. Government, instead of compelling the education of the half-timer by his employer should I think, deserve it, by encouraging the employer with good teachers and grants-in-aid from the date of the actual opening of a school, and not as I believe now, after three years of satisfactory working. Elementary education for factory children should be of a character that is likely to develop their powers of observation (as by the kindergarten system) and not simply a process of cramming, which is of little or no value when practical work is the end in view. I think that a prohibition against young children accompanying workers to dangerous or unhealthy parts of factories is reasonable and necessary. Some factories enforce it as a matter of rule, others, particularly those where women are employed, do not. It may be taken for granted that non-working children as a rule accompany their mothers, and the best way of enforcing the prohibition would be to prohibit the employment of women in dangerous or unhealthy parts of a factory. The breach of this should be made subject to a fine enforced by law. I do not think that under the vastly varying conditions of climate in the various parts of India, and during the various seasons, any analytical standard of purity of air could reasonably be enforced. Local medical inspectors of factories already have powers to meet this case, and the appointment of whole-time circle medical inspectors, and the granting of right of appeal to a chief inspector, would I think suffice. The matter of the environment of a factory, which is often beyond the control of the owner, must be borne in mind. A factory in crowded Bombay, surrounded by *chawls* and tenement houses, cannot possibly have as pure air in its workrooms as one on the banks of the Ganges in Cawnpore, and the owner of the former can no more prevent his evil plight han can owner of the latter be congratulated on personally achieving his good conditions. We do not use humidifying processes except in a small way, and I cannot express an opinion as to the fixation of a humidity standard beyond saying that the conditions of the country and climate would render legislation for this as unreasonable as in the case of air. If water *is* used for humidifying purposes, its source of supply should be controlled by the same rules that at present govern the supply of washing water, and the medical inspector should be empowered to deal with this. I do not think that the present standard of latrine accommodation, as laid down for these provinces in notification No. $\frac{1200}{III-'01 E.-177}$ of 6th May 1893, sections 26 and 27, *viz.*, one latrine to every 50 persons, and separate latrines for women, needs any improvement. The doors of working rooms should be hung so as to open readily outwards, but reasonable time should be given to owners of existing factories to effect such changes as may be necessary to comply with this. Further precautions for fencing machinery are not required, beyond facilitating the inspection of factories by expert mechanic inspectors, and by increasing the staff in this branch. If the Factory Act is to be administered reasonably, it must be administered uniformly throughout India, allowance only being made for prevailing conditions of climate, where this affects the working of the Act. I think that the appointment of whole-time medical inspectors with reasonably small circles of control is desirable. Chief inspectors to whom a right of appeal should lie are also desirable. I represent Cooper, Allen & Co, Government Boot and Army Equipment Factory. The average attendance during the first 11 months of this year in this factory is :—

Adult males	2,750
„ females	36
Children male	218
„ female	nil
Total	3,004

I think that an inspector of factories cannot be equipped for his duties unless in addition to mechanical knowledge, and a knowledge of sanitation and its means of improvement, he combines a knowledge, not merely an acquaintance, or an assumption of knowledge, but a *real knowledge*, of the native. No inspector merely trained to technicalities in England can have this. I certainly think though that a factory inspector should be acquainted with the latest practice at home. I think that any more stringent law, if it must be introduced, must be sufficiently elastic in its operation to meet varying trades, varying climates, varying seasons, and India's vastly varying peoples. Whether any such law, if introduced, *would* be more stringent than the present one, is, I think, a moot point. Any suggestions which I may have regarding the housing of factory hands have already taken practical shape in our own village of workman's dwellings, where in 900 houses we accommodate a large percentage of our most valued workmen. I can only recommend other factories to follow our example. Mr. Allen.

Witness stated that the engines began at 6 o'clock in the hot weather, and 7 o'clock in the cold weather; but the men were always allowed half an hour's grace and they worked up to 5-30 P.M. with half an hour's interval from 12 noon to 12-30 P.M. In exceptional times, when for instance there was a big military expedition on, they had worked up to 8 P.M. During the South African war this overtime working went on for some months. The majority of the men were on piece work, but some were paid by the month. These latter were on task work, and when they had done their task, which the firm considered a fair day's work, they were allowed to go home even before the factory was closed. The knowledge that they could thus leave when they had done their task made them more attentive to their work. Witness had had no experience of mills and factories, where long hours were systematically worked, and his evidence and expressions of opinion applied only to the conditions of work existing in his own factory. He thought that when long hours were indulged in the operatives adapted themselves to the circumstances, and were indolent, inasmuch as they did not attempt to turn out the maximum amount of work in a given time. In the course of the ten-hours day in his factory the men took about one hour off. The Hindu workers were of low caste, but there was a good sprinkling of Muhammadans in the factory. Witness was opposed on principle to any restriction of adult working hours. A fixed twelve-hour day would not affect them except when they wanted to work overtime to execute a big Government contract. When the half-timers had done their seven hours' work they were sent out of the factory. The children commenced work with the adults, namely, half an hour after the engine started. It was possible for them to be employed in the afternoon elsewhere, but he did not think that they were. He had great difficulty in getting them out of the factory because most of them preferred to wait and go home with their grown up relations. The children earned from R3-8-0 to R6-8-0 a month, but a large number of them were paid by the contractors. The names of all the children were kept in the attendance books. He approved of the minimum adult age being reduced to thirteen years, as he considered that a boy of thirteen was quite capable of doing a day's work in their factory. Probably 10 *per cent.* of the workers were between the ages of thirteen and sixteen. Even in the case of overtime he thought that a boy of thirteen was able to do twelve hours work. Similarly the minimum age for children should be reduced to eight years, as he considered that a child of eight could easily do half a day's work in their factory. If there were emergency exemptions in the Act, so as to allow overtime work in special circumstances, then he would not object to a fixed twelve hours' day; but, as already stated, he did not like the principle of interfering with adult labour. Their work was mostly by hand, and the children had duties suited to their strength. They sewed the soft parts of the leather, similar work to what would be done by girls in England. The present standard for age adopted by the Civil Surgeon was very strict, and many boys were refused as under age. He had had no serious strikes. He could not compare Indian with English workers, owing to their different temperaments. The Indian worker wanted to take his time, but in his factory they appeared to value the privilege of being allowed to go home when they had done their day's task. This privilege had had a good effect, and many left before the closing hour. He could not say that the workers had increased in efficiency in their work, and the experienced hands never seemed to go beyond a certain stage. They attained a certain standard of efficiency, and stopped there. If the men asked for an increase in pay the firm asked for an increase in their task of work. The man on task work often did work over and above his daily task in preference to going home early. His experience was that the men who did most work did the best work. He had been told that the Indian boot worker did as much work in the day as an English worker, but not in the same number of hours. They had a school in their village for the very young boys, but it was not attended by the half-timers. They had tried to prevent very young children from entering the factory, but could not altogether stop it. When the factory worked overtime the hands only worked overtime four days a week. All the year round he considered that the Indian operative could not work more than a twelve hours' day in their factory. He was not in a position to say anything about other mills and factories. He was not in favour of night work, and had abandoned it. The electric light was only used to illuminate the dark places of the factory and for special cases of overtime working. The daily wage man earned the same salary in the hot as in the cold days, but the piece worker earned more in the former than in the latter. He considered that the Muhammadans were more regular in their attendance than the *chamars*. The hands took about four days a month off, in addition to the Sunday holidays. They were paid from the 12th to the 25th of the month, and after pay-day there was a certain amount of drunkenness among the *chamars*. Taking the hands on the whole he would describe them as steady. An extra good man would earn from R25 to R30, but the average monthly wage earned was R10. In the event of a restriction of working hours he would require a special exemption in the Act for allowing overtime for Government work, and there should also be a provision to permit of certain light duties being attended to on Sundays. For instance, about twenty-five men had now to attend to the hides for about two hours on Sunday morning, otherwise the hides would be spoiled. These men were paid extra. At present there was no scarcity of hands, but he considered it wise to have their workers in their own village. *Oral evidence*

The factory inspectors came once or twice a year, but the Civil Surgeon came more frequently. He believed that the Civil Surgeon stated the probable age of the child on the certificate, and when the

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child attained the age of fourteen he was taken on as an adult without further examination. He did not oppose the proposed "young persons" class, and would say that if the Commission considered the creation of such a class desirable, then to limit their hours to twelve was also desirable. He had no wish to work his men for twelve hours, but should like the option of being able to do so should special circumstances arise. The witness summarised his recommendations as follows :—

(1) there should be no legal restriction on the working hours of adults;

(2) there should be a special class of workers intermediate between the half-timer and the adult, from 13 to 16 years of age, whose working hours should be restricted by law to 12 hours daily between sun-rise and sun-set;

3) children from 8 to 12 years of age should be allowed to work in factories for not more than 7 hours daily between sun-rise and sun-set.

Witness No. 135.

The Cawnpore Woollen Mills Co., Ld., Cawnpore.

Cawnpore Woollen Mills Co., Ltd. *Written evidence.*

In our opinion the working hours of adult males should not be limited by legislation. The regulation by law of the number of hours which an adult male might be allowed to work would be an interference with the liberty of the subject politically inexpedient and undoubtedly distasteful to the worker. The demand for adult male labour in most parts of India is, within our experience, continuously in excess of the supply, and consequently were any mill or group of mills to attempt to establish working conditions which the employé found detrimental to his health or interests, the employé would sever his connection with that mill or group of mills, and enlist with another concern where the conditions were more to his taste. No mill would be able for any lengthy period to continue working hours that were oppressive. The work done by the individual employé in India never approaches that expected from an English worker in an English mill, and there are intervals for relaxation in India which are not recognized in England, consequently the work is far less strenuous and less likely to injuriously affect the health of the employé. But should it eventually be deemed necessary to limit by legislation the number of hours for which a mill might work each day, it would be essential to make provision for the suspension of such restrictions should some highly emergent demand, such as the necessities of war, render it desirable to increase the normal daily output. In the case of a mill, which like the Cawnpore Woollen Mills is looked to by Government to provide clothing and similar necessaries for the army, the normal outturn during times of peace must necessarily be largely augmented in war-time to satisfy the demand for war supplies. As a matter of fact, the ordinary hours worked by this mill (engine running time) average during the year only 10 hours 20 minutes daily, from which have to be deducted the intervals which each worker may take for such purposes as smoking, bathing, etc. This period of relaxation from work is divided into four spells of 10 minutes each, but including the time taken in going to that part of the compound specially reserved for these purposes, and the time taken in settling down again to work, the total period during which a man may be said to be absent from his post were he to take full advantage of this permission may be taken as not less than one hour a day. From statistics which we have compiled we find that very few of our workers actually take full advantage of these periods of relaxation. Indeed, the provision made by the various departments of this mill for the absence of workers on this account, although they are found in actual practice to be ample, would not admit of all the workers taking 4 spells each during the day. Special passes are kept in each department in the proportion of one for every 20 workers, and no person is allowed to pass the barrier without this special pass. No worker is allowed to go to the special part of the compound reserved for smoking, etc., for one hour after the mill starts or ½ hour before it stops, both morning and afternoon. This deducts three hours from the working day, and leaves, on the average working day, 7 hours 20 minutes during which this leave may be taken. If each worker going out on the special pass takes the full 10 minutes, the 20 men who can use one pass take 200 minutes, so that this period less the first 10 minutes, or 3 hours and 10 minutes must elapse before the worker first using the pass can again claim it. The average day of 10 hours 20 minutes commences at 6-15 A.M. and ceases at 5-35 P.M. The first batch of workers can leave at 7-15 A.M. and assuming all the passes to be in use, they cannot go out again until 10-35 A.M. Returning at 10-45 A.M., the pass will only permit four more men to pass out before the limit time of 11-30 A.M. is reached. As our records show that there are a certain number of men who *do* take full advantage of the passes, it is obvious that there is a larger number of men who only leave their work once a day, and we find from our records that in actual fact a large proportion of our operatives do not leave their work at all during the working day. During the past few weeks we have been keeping a specially careful record of the number of workers passing out for relaxation during working hours, and on no one day has the number exceeded 3,000, so that with an average number of 1,815 persons employed it is evident that the average time taken by each worker out of the working day for bathing, smoking, etc., does not much exceed 15 minutes. We know that this is contrary to the general belief, but our records show this quite clearly. During 1907 the average number of times daily each individual worker passed the barrier was as follows :—

January	1·01;	July	1·15;
February	1·07;	August	0·93;
March	1·12;	September	1·00;
April	1·22;	October	1·01;
May	1·14;	November	0·94;
June	1·12;	December	0·88;

The average number of these spells of rest actually taken by our workers throughout the year is therefore 1·05 daily. The proportions of those passing out once, twice, or oftener, and of those not leaving their work at all, are shown for one day in May and one day in November as follows:—

	May.	November.
No leave	39·66%	48·62%
One spell of rest	17·50%	29·99%
Two spells of rest	28·10%	14·09%
Three spells of rest	10·15%	4·94%
Four spells of rest	4·59%	2·36%

A number of our operatives attend at the mill some little time before the hour for starting in the morning, and utilize the mill latrines then—this must reduce the number using them during working hours, and appears to exhibit some desire on the part of the worker to remain at his post during engine running time. The longest day worked by us during the year is 11 hours 40 minutes and the shortest 9 hours 30 minutes. From May till August the engine is stopped 2 hours from 11-30 A.M. to 1-30 P.M. The following table shows the hour of commencing work and the hour of stopping, with the midday interval, for the whole of one year:—

Starting time A.M.	Stopping time P.M.	From	To	Midday interval.	Number of hours worked.
6—45	5—15	1st January	12th January	1 hour	9—30
6—45	5—20	13th do.	19th do.	1 do.	9—35
6—40	5—30	20th do.	26th do.	1 do.	9—50
6—40	5—40	27th do.	9th February	1 do.	10-0
6—40	5—45	10th February	23rd do.	1 do.	10— 5
6—40	5—50	24th do.	2nd March	1 do.	10—10
6—30	6— 0	3rd March	9th do.	1 do.	10—30
6—20	6— 0	10th do.	16th do.	1 do.	10—40
6—10	6— 0	17th do.	23rd do.	1 do.	10—50
6—10	6—10	24th do.	30th do.	1 do.	11—0
6— 0	6—10	1st April	6th April	1 do.	11—10
6— 0	6—15	7th do.	13th do.	1 do.	11—15
5—55	6—20	14th do.	20th do.	1 do.	11—25
5—50	6—30	21st do	27th do.	1 do.	11—40
5—40	6—30	28th do.	5th May	2 hours	11—50
5—30	6—30	6th May	6th July	2 do.	11—0
5—35	6—25	7th July	13th do.	2 do.	10—50
5—40	6—20	14th do.	3rd August	2 do.	10—40
5—50	6—15	4th August	17th do.	2 do.	10—25
5—50	6—15	18th do.	7th September	1 hour	11—25
6— 0	6—10	8th September	28th do.	1 do.	11—10
6—10	5—55	29th do.	5th October	1 do.	10—45
6—10	5—45	6th October	12th do.	1 do.	10—35
6—20	5—45	13th do.	19th do.	1 do.	10—25
6—30	5—40	20th do.	26th do.	1 do.	10—10
6—30	5—30	27th do.	9th November	1 do.	10—0
6—35	5—20	10th November	23rd do.	1 do.	9—45
6—40	5—15	24th do.	30th do.	1 do.	9—35
6—45	5—15	1st December	31st December	1 do.	9—30

The mill is equipped with electric light, but it is not used except in emergent circumstances such as are referred to above. In view of the comparatively short hours worked by this mill we are not in a position to express an opinion as to the effect of long hours upon the physique of workers. At the times now long distant when, for reasons mentioned above, we have found it necessary to work

Cawnpore Woollen Mills.

longer hours, we did not notice any injurious effect upon the health of the operatives, nor was the attendance appreciably affected thereby. We have already expressed our opinion that the number of working hours for adult males should not be restricted. But if, as the result of this enquiry, the Commission should deem it desirable that their working hours should be restricted, we would advocate a day of 12 hours engine running time, and an interval of one hour between 11 A.M. and 2 P.M. We consider that a larger range of hours than that suggested by the Commission, viz., between 5-30 A.M. and 6 P.M. or 6 A.M. and 6-30 P.M., should be named within which the legal maximum of hours might be worked, as by this means mill owners might be able to permit their employés to observe their various religious and other festivals by giving a prolonged interval during the day, and continuing the work later, thus maintaining the normal daily production. Local conditions also might demand that in some cases work should be commenced some time later than the morning hours indicated in the question. With either of the time limits mentioned above it will further be observed that this mill would not be able to allow the 2 hours' midday interval now enjoyed by the operatives in the hot season without curtailing the present moderate working hours. We would suggest that the legal working hours should be any twelve between 5 A.M. and 8 P.M. It should be prescribed, in our opinion, that the engine should be stopped for one hour between 11 A.M. and 2 P.M. except in cases where the hours worked for the total day (engine running time) do not exceed 8 hours in all. It frequently occurs that in order to observe certain religious or other ceremonies, workers desire to be absent from the mill from 4 o'clock or thereabouts onwards rather than take a whole day's holiday. Any legislation relating to working hours should therefore be such as would admit of an employer running his mill continuously for 10 hours, and then ceasing work for the day to suit cases like that alluded to. The shift system is not worked in this part of the country, and we are therefore not prepared to offer any opinion upon the advisability of prescribing legal working hours for factories adopting this system. In this mill adults only are employed, certificates of age being obtained from the Civil Surgeon for all workers not obviously beyond the age of 14 before their services are entertained. We have no knowledge of the alleged employment as adults of persons between 12 and 14. But in our opinion the creation by law of a special class of workers corresponding to "young persons" under the English Act is desirable, with working hours limited to 12 daily, on the ground that the youth from 14 to 16, while physically fit to work 12 hours daily, is not fitted to work longer hours without danger of physical deterioration. In the event of this proposal being adopted, if a mill declares to work only 12 hours daily it should not be called upon to keep a register of "young persons". In the case of a mill working more than 12 hours daily a register of "young persons" should be kept, but we do not consider that it would be desirable to make any provisions as to physical fitness—it should relate only to age. Many of the workers who would be comprised in this class are already married and fathers: if the State is not prepared to legislate as to the physical fitness of youths to exercise the duties of paternity it would seem to us to be improper to interfere with their desire to maintain their offspring by working as adults in mills. We think that the employment of women in mills should be prohibited after 7 P.M., and that under no circumstances should they be employed for more than 12 hours a day in all, thus grouping them along with the proposed class of young persons. This would allow those of them who have home duties to attend to the same. The desirability on grounds of morality of not employing women after 7 P.M. is sufficiently obvious. The Indian child of 9 years of age is better developed physically than the English child of similar age, and is quite fitted to take his place in the mill, and to do the light work to which he is commonly put in Indian mills. We consider that no alteration should be made in the minimum age at which children may be allowed to work in Indian factories. We do not think, however, that certificates of physical fitness should be required. As mentioned above, no children are employed in this mill, but from a general knowledge of Indian mill conditions we know that a child who is physically unfit would not be employed in Indian mills by very reason of his physical unfitness, while if by any chance he is so employed, the conditions under which he works are not such as would be likely to affect him injuriously. Rather is the reverse the case, as in the vast majority of instances the mill is superior in sanitary surroundings to the conditions of his home-life, and the work is so light as to afford to the child a not disagreeable alternative to the work which he would be called upon to perform were his services not available to the mills, while his earnings provide him with nourishing food. It is certain that were a child rejected by an inspecting officer as unfit for employment in the mill, he would not thereby be freed from labour of another kind, probably more trying, and certainly more removed from sympathetic supervision. Similarly we are of opinion that certificates of age and physical fitness to work full time should not both be required. Certificates of age only, however, might be made compulsory. In the matter of the education of children it would, in our opinion, be an unfair tax upon the employer to compel him to provide this at his own cost. Elementary education should be made available by the State either within or without the mill premises at the option of the employer, and upon the State should rest the responsibility of seeing that due advantage is taken of the education thus provided. Factory owners would without doubt render all reasonable aid to the officials entrusted with this duty in making enquiries as to the occupations of the children during non-working hours. This Company already provides elementary education for the children of workers residing at the Company's settlement. We have there a school with 18 children upon the register, of whom 12 are regular attendants. Their ages are from 6 to 12. They are taught Urdu, Nagri, and arithmetic. School hours are from 10 A.M. to 3 P.M. in winter, and from 6 A.M. to 11 A.M. in summer. The boys have been provided with gear for outdoor sport, which they appear to appreciate. The school was inspected by the Deputy Inspector of Schools on 6th September 1907, and the result was reported to be satisfactory. No fees are charged, and the books are also provided free. The whole expense of the school is borne by the Company, and it is open to the children of any employé. As a matter of practice, non-working young children are prohibited, in the interests of employers, from accompanying workers to dangerous or unhealthy parts of factories. It is difficult to legislate against such a breach of ordinary factory rules, and in our opinion this should be left to the mills themselves. Factory inspectors might be directed to draw the attention of mill owners to any breaches of this commonsense prohibition, and leave them to apply any correction called for. We

do not believe that the testing of samples of air from factories in India is either necessary or desirable. We know of no factories here that are not well ventilated. The enforcement of a standard of purity would be likely to lead to numerous difficulties in practice, giving rise to irritation without any compensating advantage resulting, and altogether suggestive of an arbitrary restriction. The general question of the purity or otherwise of the air and the provision of ventilation might be left to the medical inspectors whose recommendations when based on commonsense are generally followed. Should a mill owner, from contumacy or other cause, fail to follow the recommendations of the medical inspector, the matter might be referred to the chief inspector of factories, whose decision should be final. Mill owners in their own interests are just as anxious as anybody to maintain a sweet and wholesome atmosphere in their factories. As we do not in this mill work any process necessitating humidifying we are not in a position to speak of the desirability or otherwise of the provision of a standard of moisture as indicated by the Factory Commission, but because the local atmospheric conditions differ so widely in different localities and also in different seasons and for the reasons specified above we think the matter should not form one for restrictive legislation. We are not of opinion that the standard of latrine accommodation should be raised beyond one seat for every 50 workers, but separate urinal accommodation might be required. We would observe, however, that the form of the Indian latrine and the habits of the operatives are such that the ordinary latrine seat is the one best fitted for the purpose of urinating. The average native does not know how to use a urinal of the conventional type. Our latrines appear to be popular, as many workers, as already remarked, come some time before the mill starts in the morning to make use of them. They are therefore an incentive to punctuality in some degree! We think that provision should be made for the hanging of all doors of working rooms so as to open outwards, but with an ample time—say two years—for all factories to conform to this regulation, new factories of course being in the meantime compelled to hang doors in the prescribed manner. We do not think that any further precautions for fencing machinery are necessary or desirable, all reasonable precautions being already in force. In the case of the Cawnpore Woollen Mills we believe it would be difficult to suggest any precaution of this nature which has not already been taken. We might mention specially the protection of boiler water gauge glasses which our workers appear to regard as a boon, although we believe these are not commonly protected, even in England. With one Factory Act for all India, the administration should be made in the same manner throughout India, always providing that rules and regulations thereunder continue to be promulgated by the various Local Governments and Administrations to suit the differences of local conditions. The appointment of full-time medical inspectors of factories would, we think, be desirable, whose duties would supplement those carried out by the present inspectors of factories. Their reports should, in our opinion, however, be submitted to the chief inspector of factories, and not as at present to the local magistrates, whose experience in factory matters is necessarily limited, and their knowledge imperfect. Much inconvenience is caused to mill owners by the fact of the everchanging personalities of the Civil Surgeon, acting as medical inspector, and the Magistrate of the District, acting as local inspector, whose opinions do not invariably coincide with those of their recent predecessors. The mill owners are as a consequence frequently put to considerable expense in satisfying the requirements of the local inspectors for the time being in carrying out alterations which in the opinion of the mill owner, supported probably by the immediately preceding inspecting officials, are unnecessary and unreasonable. Cawnpore Woollen Mills.

The average number of men employed in the factory is 1,600
Do. do. women do. do. is 215

Children are not employed at all by us. The following table shows the number of days in each year during the last 10 years this factory has worked over 12½ hours a day, and the average daily number of hours worked each year:—

Year.	Number of days on which the factory has worked over 12½ hours.	Average daily number of hours worked.
1907	*Nil.*	10 hours 17 minutes.
1906	*Nil.*	10 „ 19 „
1905	*Nil.*	10 „ 24 „
1904	*Nil.*	10 „ 26 „
1903	16	10 „ 35 „
1902	*Nil.*	10 „ 24 „
1901	53	11 „ 28 „
1900	91	11 „ 37 „
1899	19	10 „ 52 „
1898	116	12 „ 13 „
1897	102	11 „ 50 „

From May to August a midday interval of 2 hours is given—at all other times the midday interval is one hour. The work done in this mill varies so much in character that it is difficult to lay down a standard of production measured in terms of weight of yarn *per* hour, but we have means of ascertaining comparative productions in various departments. Any alteration in efficiency due to shorter hours would be expected to be manifested in some degree at those times when the mill

Cawnpore Woollen Mills.

makes a change from the one-hour interval to two-hours' midday interval, and *vice versâ*, but our mill records do not exhibit any marked variation in the hourly production which could be clearly ascribed to the length of the day worked. We do not consider that certificates as to physical fitness should be required, but only one relating to age, the possession of which should be made compulsory before the candidate can be admitted to employment. We believe that it would be very difficult to apply the principle of "physical fitness" certificates fairly in practice, and in our opinion it is not at all desirable that the State should interfere between employer and would-be employee when the latter is of full age, willing and anxious to work, and the employer wishes to give him employment. Moreover, if the certifying authority is to have power to prevent children who have hitherto worked half time from working as adults until a certificate of physical fitness has been obtained, it follows that they must have the power to disqualify by reason of physical unfitness any other person applying for a certificate. And if such a power be given, is it to be exercised continuously with regard to the subject of the certificate, for it does not necessarily follow that the person certified as physically fit for adult labour at one time could or would be certified as fit a year later? We are strongly of opinion that the State should not intervene in the matter of the physical fitness of candidates for employment in mills and factories. The employer may be trusted to exercise due discretion in the engagement of workers, for it is not to his interest to have in his factories any worker who is physically unfit for labour. If the certificate necessary to authorize employment as an adult be one with regard to age only, and a certificate of age be insisted upon for all workers not obviously beyond the age specified as the minimum—at present 14—no other safeguard is needed. The creation of a special class of "young persons" may have certain advantages, and we would be inclined to support it. The limits of age should be from 14 to 16 If the law be eventually amended so as to create such a class, and to restrict their hours of employment to the same number as that worked by women, it will, in our opinion, cause most factories to declare for a working day corresponding with the maximum working hours permitted to the class of "young persons". The approximate number of "young persons" between the ages of 14 and 16 at present employed by this factory is 220, all males. We are of opinion that only those men who have had at least 5 years' experience in an Indian factory, and preferably in the position of mill manager, should be appointed factory inspectors. Such a man might be appointed as a probationer, and might even be sent to England for one year's training with the home inspectors, when after having given satisfactory evidence of his knowledge of the Indian Factory Act and rules, his appointment as an inspector would be confirmed. We consider it essential that a thorough knowledge of Indian conditions should be made an important item in the qualifications of a candidate for the post of inspector. Whatever new legislation be agreed upon as desirable, rules to suit the different Provinces should be made by notification by the Local Governments under the advice of the chief factory inspector for the Provinces, and supported by the chief factory inspector for India. We would be averse to making the housing of factory hands compulsory under the Act, but as a matter of practice many mills and factories are finding it desirable in their own interests to attend to the satisfactory housing of their operatives. This Company has a settlement consisting so far of 452 houses built for this purpose in 1902, and a chart is appended showing how the houses have been occupied. Prejudice had to be overcome in the early stages, the workers viewing with suspicion the provision of dwelling accommodation at rates which they know to be financially unremunerative to the Company, but the policy of benignant non-interference with the inhabitants which we have carefully pursued has now gained the confidence of the workers, and the dwellings have at last become almost popular. The average cost *per* house with private courtyard is R350, and without courtyard R300. The rent charged is 12 annas and 8 annas *per mensem* respectively. The houses with courtyards have private latrine accommodation. There are three large blocks of public latrines, connected with the Municipal sewage system and automatically flushed. The houses measure 12 × 10, and each has a private verandah measuring 10 × 6. They are arranged in blocks on the courtyard system, 24 houses in a block The courtyards are paved, and a hydrant is placed in the centre, so as to provide an ample and convenient supply of water. From statistics which we have compiled we find the attendance at the mill of dwellers in the settlement is 5% more regular than that of non-dwellers. The general health of the residents is excellent. A statement furnished by us to the local health authorities showing the death rate to 30th June 1906 to be 25·5 *per* 1,000 is appended. The death rate from 1st July 1906 to 30th June 1907 is 23·09 *per* 1,000. The death rate for the City of Cawnpore for 1906 was 81·63, and the mean rate of the previous 5 years 74·17. We have had no cases of plague during the past year. A noticeable feature of the settlement is the sturdiness of the young children living there, which may be fairly ascribed to the improved conditions under which they are living as compared with children born and bred in the city. The provision of more houses is at present under contemplation. A census of the village taken during December showed a population numbering 1,161; of this number, 55·22% were men, 24·12% women and 20 66% children under 14. The Commission may be interested in certain special benefits which the workers employed by this Company enjoy. Ordinarily in India it is found necessary to inflict fines upon the workers to some degree for disciplinary purposes, and to punish for bad or careless work. All such fines imposed on workers in this Company are credited to a fund from which payments are made to deserving aged or disabled workers, or to the families of those workers who have died after being some years in our employ. The funeral expenses are paid from this fund in the cases of all workers dying after one year's approved service with the Company. During the past three years the payments from this fund have aggregated R11,990. Interest is credited to the fund regularly. To encourage regularity in attendance a bonus of one month's pay is given to all members of the native staff, whatever their salary or wage, at the conclusion of the year, provided they have not been absent without leave at all during the year, or absent with leave on any account whatever for more than six days, exclusive of the regular holidays. The number who thus participated for 1906 was 123 and for 1907 139. A well equipped dispensary is maintained at the mill, with a trained hospital assistant in charge, and all workers are treated free of charge, medicines for themselves being also supplied free. Medicines are supplied for members of their families not working in the mill at a nominal charge. During 1905, 5,904 cases were treated, during 1906 5,299 cases, and during 1907,

3,440 cases. An analysis showing particulars of the cases treated during 1906 and 1907 is appended. Sundays are invariably allowed as holidays, apart from any native holidays which may be given during the week. During the past 5 years the average number of whole-day holidays which it has been found necessary to allow was 3·60 annually, *i.e.*, three years each 4 days, and two years each 3 days. Part-day holidays have averaged during the same period 6 60 hours annually. The two figures combined represent 4¼ days *per annum*. Sunday is always observed as a close holiday for all workers, the mill stopping earlier on Saturday to permit of all cleaning of machinery being done. No cleaning is allowed on Sundays. Wages are paid fortnightly, and all wages are paid by the European in charge of the department. In order to compensate workers in some degree for the higher prices of food stuffs due to the present scarcity, as in the famine of 1896 we have instituted, with effect from 1st December and to continue until such prices are more nearly normal, a scale of famine allowances. Cawnpore Woollen Mills.

Abstract of deaths in the Cawnpore Woollen Mills settlement from 1st January 1905 to 30th June 1906.

	Adults.	Children (under 3 years).
Consumption and phthisis	5	0
* Plague	5	1
Fever	6	6
Pleurisy	0	5
Asthma	2	0
Cold	1	1
Old age	1	0
Puerperal insanity	1	0
Pneumonia	1	0
Catarrhal bronchitis	1	0
Measles	1	3
Small-pox	1	0
Dysentery	1	1
Diarrhœa	0	1
	26	18

Average of deaths *per* 1,000 *per annum* = 25·5

* All imported cases.—In some cases the patients were brought into the settlement suffering from plague; in others they were persons who neglected ordinary precautions by living partly in the city and partly in the settlement.

Abstract of cases treated by the Cawnpore Woollen Mills dispensary during 1906-1907.

Month.	Minor ailments.	Fever.	Dysentery and diarrhœa.	Plague.	Infectious diseases.	Pulmonary complaints.	Minor accidents.	Total
January 1906	313	50	19	3	5	..	..	390
February	245	47	7	3	2	5	..	309
March	363	90	26	..	2	3	1	485
April	300	80	27	2	..	1	..	410
May	300	56	20	..	1	2	..	379
June	284	56	26	..	1	1	..	368
July	325	72	31	..	..	2	..	130
August	394	143	38	—	..	2	..	577
September	322	230	21	..	..	..	..	573
October	314	293	30	..	..	..	..	637
November	240	164	12	3	..	..	..	419
December	232	76	12	..	1	1	..	322
	3,632	1,357	269	11	12	17	1	5,299

Cawnpore Woollen Mills.

Abstract of cases treated by the Cawnpore Woollen Mills dispensary during 1907.

Month.	Minor ailments.	Fever.	Dysentery and diarrhœa.	Plague.	Infectious diseases.	Pulmonary complaints.	Minor accidents.	Total
January 1907 .	229	52	9	3	..	1	..	294
February . .	206	35	14	3	..	2	..	260
March . . .	229	58	22	2	2	2	..	315
April . . .	232	56	17	..	1	..	..	306
May . . .	202	50	9	..	..	2	..	263
June . . .	172	36	11	..	..	2	..	221
July . . .	239	50	9	..	1	2	..	301
August . .	211	49	18	..	..	1	..	279
September . .	187	171	23	..	..	1	..	382
October . .	190	128	13	..	..	..	..	331
November . .	169	95	16	..	..	6	..	286
December . .	141	53	8	..	..	..	..	202
	2,407	833	169	8	4	19	..	3,440

NOTE.—The diagrams referred to above have not been reproduced.

Mr. Alfred Butterworth, mill manager of the Cawnpore Woollen Mills.

Mr. A. Butterworth, representing the Cawnpore Woollen Mills.
Oral evidence.

Witness stated that he had had experience in the industry in India since November 1882, and had had previous experience in tweed factories at home. The average working time of the Cawnpore Woollen Mills was ten hours twenty minutes, but they had to work overtime in certain departments on occasions. Such departments, not requiring engine power, worked up to 9-30 P.M. on 74 days in 1905, 74 days in 1906, and 56 days in 1907. On all these occasions overtime had to be worked in order to execute urgent orders. Those who were paid a daily rate of wages received half a day's pay for overtime, and the pieceworkers were paid by the work they turned out. The hands were allowed to go out four times a day for ten minutes at a time, but the majority did not avail themselves of so much leave. Certain workers were allowed to go out without leave tickets. On an average each hand went out twice a day, and so had twenty minutes off. He did not think there were many errors in their record of those who went out and came in, and the figures in the written statement were substantially accurate. If a man was out for more than ten minutes he was fined one anna. The men had agreed to the system, and rarely disputed the fine. This rule was introduced a short time after he joined the mills without any protest from the hands. He believed that the men were content with the working hours. The restriction of adult labour would only affect them as to overtime work, and if special provision were made for this in the Act then they would not be at all affected by any restriction of adult labour. Witness approved of one hour's interval in the middle of the day, and thought that so far as the Cawnpore mills were concerned this should be obligatory. Most of the Cawnpore hands were accustomed to take their meals during this hour's interval, and not at any odd hour in the morning. The large majority certainly took their big meal during the interval. They did not employ half-timers, because of the trouble entailed in complying with the Act, and for the present they could obtain all the adult labour wanted. They had not employed any half-timers since the eighties. In the hot weather the hands had an interval of two hours, and they appreciated the longer rest. About one half went home, and the others took their meal and slept in the compound. The rooms of the factory were locked during the interval, and every hand had to go out into the compound. Sunday was accepted as the regular weekly holiday, and the hands turned up regularly on the Monday morning. They were allowed their big native holidays in addition. The Muhammadans only were given leave for the *mohurrum* and *bakr-id*, and the mill was worked by the Hindus, but there were no Hindu holidays on which the Hindu workers only were allowed to go. The Hindus formed the majority of workers and the mill had to be closed on their big festivals—on the *holi* and at the *Durga-pujas*, on each occasion for one or two days. No young adults regarding whose age there was any reasonable doubt were employed before being certified by the doctor to be over fourteen years. These youths were sent to the civil hospital any day, and it was very seldom that one was rejected. The doctor did not pass any whom witness thought should not be passed. They obtained 160 new certificates for such workers last year. There were 420 houses occupied in the settlement by 641 men, 280 women, and 240 children under fourteen years. Witness thought that the hands were equally attentive to their work in the long days as in the shorter days. They had to employ a much larger number of hands than would be required in an English mill of similar size. Roughly speaking they wanted twice the number in India to do the same quantity of work that English operatives would do. In the spinning department there would be one minder and three piecers on a pair of mules at home, while in India they employed from five to seven men on a pair of mules. They employed 220 young persons between the ages of fourteen and sixteen.

Mr. A. Butterworth

This meant about 14 *per cent.* of the total workers, so that any restriction of the hours of young persons would determine the working hours of the mill. There were some departments, like tailoring, which they would be able to work irrespective of these young adults, and there were two rooms where the machinery was driven by electricity, which could be run independently of the main engine. Statistics spread over a period of six months showed that the attendance at the mill of the dwellers in the settlement was 92·19 *per cent.* of the maximum. This meant 8 *per cent.* of absentees, or about two days off a month. Of the non-settlement dwellers 88·69 *per cent.* were present on all the working days. This meant 12 *per cent.* of absentees, or about three days off a month. The workers gave all sorts of excuses for being absent, including that of illness, but if their excuse was not accepted they were fined one day's pay. As a rule they always asked for leave, which was only very rarely withheld. Only a small minority indulged in drink, and there was no drunkenness in the settlement. Of their hands 7 had been with them for nearly thirty years; 36 for over twenty years; 47 for over fifteen years; and 28 for over ten years. The Cawnpore operatives seemed fond of moving about from mill to mill. The tailors never came before 7 o'clock at any time of the year. They had their midday rest, and in cases of overtime they were allowed twenty minutes off after the whistle went. During overtime working the longest day was never more than thirteen and a quarter hours. Witness thought that the question of the physical fitness of a youth could be left to the employer, who was not likely to engage a physically unfit operative. An employer could not detect a man who had developed phthisis. He did not object to the physical fitness test because he thought that a large number of men would be thrown out thereby, but rather on the ground that it would be depriving a man of earning a livelihood. He admitted that it would be advisable to exclude all phthisis cases from working in a factory, and had the question of physical fitness related particularly to infectious diseases then he might have given an answer in the affirmative. If the "young persons" class were created they could replace the 220 young adults affected by full-age adults, and so work the mill. They would have to do so if they wished to run the mill longer than the hours permitted to "young persons." It would, however, mean a slight increase in wages. Comparing the efficiency of English and Indian labour, witness stated that one woman in England would look after six circular hosiery machines, while in India they had to have one man to each. In India one man could not be trusted to look after more than one automatic card feeding machine, while in England one man attended to 8 or 10. A restricted twelve hours' day would also affect them in the case of the men who were wanted to work overtime to effect repairs. He thought that the workmen had improved slightly in skill, and in the Cawnpore Woollen Mills they now did a better and higher class of work with the same number of hands. They ran their machines at the standard speed for which the machines were built, and just as fast as in England. They had made calculations of the efficiency of Indian and English operatives *per* loom, and were of the opinion that the Indian operative did not get so much production out of the loom as the English worker.

Witness No. 136.

The Cawnpore Cotton Mills Co., Ld., Cawnpore.

Cawnpore Cotton Mills. *Written evidence.*

The Cawnpore Cotton Mills Co., Ld., employs 2,397 men, 177 women, and 166 boys. We regret that statistics are not available showing the average number of hours worked daily, for each year, during the last ten years. Information is not available showing the effect of working days of varying length on the production. The probable number of "young persons" employed in our factory, assuming an age limit of fourteen to sixteen, would be 270 to 300. We are not aware of anything connected with our industry which calls for exceptional treatment. We approve of the suggestion that inspectors from the United Kingdom should be obtained for factory work in India. In any event we consider that factory inspectors should receive part of their training in England. We do not consider it necessary to provide for any elasticity in the actual operation of any law which it may eventually be decided to introduce. Judging from the workpeople with whom we come in contact, the physique of employés does not appear to have been affected by the hours they have up to the present worked. Very few of them work the whole time the engine is running: about 10 *per cent.* of our hands may be seen at any time of day bathing, washing garments, smoking or otherwise loitering about the mill compound. The working hours of adult males should, in our opinion, not be limited by legislation. Should Government find it desirable to limit the working time of adults, it would be necessary to make employers who exceed the maximum laid down liable to fine.

(1) The starting and stopping time should be left to local authorities to be decided by local conditions. In Cawnpore we find that from April to September it is possible to work without artificial light from 5-30 A.M. to 6-30 P.M.

(2) We consider that the engine should be stopped for an hour between 11-30 A.M. and 1 P.M. The half hour usually allowed is too short, and does not admit of the workpeople resting, after taking their food at midday.

(3) We have no experience with the shift system, and do not, therefore, advance any opinions on it.

We cannot say that we have noticed any physical deterioration due to the employment of persons between twelve to fourteen years, but at the same time it is not reasonable to suppose that a boy of twelve to fourteen is as fit to attend a machine as a man of more mature years, say twenty to twenty-five. We would therefore recommend the adoption of a class called "young persons," to consist of workers twelve to seventeen years old, who should not be allowed to work more than twelve hours, which should be split up into two periods of six hours each, with an interval of one hour. Women should be put into the "young person" class, and the hour and a half now given them should be abolished. With the "young persons" class thus arranged for there would be no necessity for limiting the hours worked by adults, as the restrictions placed on young persons (including women) would affect such a large percentage of the total number of employés as to make it impracticable

Cawnpore Cotton Mills.

to run the mill without them. If it be decided not to establish a "young persons" class, it is difficult to see what practical purpose a register of the younger adult labourers could be put to were it kept. Women should unquest onably be prohibited from working at night. We have not noticed any evil effects resu ting from the working of children at the age of nine and do not consider it necessary to raise the min mum beyond that age. Certificates of age only should be required before children are employed. It would be extreme y difficult to lay down a standard of fitness which would be just to the employer or employé. Children who have worked half-time should require a certificate of age only before being allowed to work full time as adults. To pronounce an adult as physically unfit would in many cases depr ve the ma n support of a family from wage-earning in an honest manner. The work of the certifying surgeon would also be increased, as it does not appear practicable to prevent candidates for full time who have been refused a certificate of physical fitness at one mill trying all the mills in the neighbourhood and elsewhere until they were successful. Children should be employed in regular sets, and their attendance recorded in such a manner as will enable the inspector to check the names of those present at the time of his visit with the register, and to satisfy himself that they were on y working in that set. Factory owners should not be saddled with the burden and responsibility of providing education for child workers. It may be taken for granted that factory owners are sufficiently alive to their own interests not to run any risks by permitting young children to enter dangerous parts of their premises. To prescribe an analytical standard of purity for air in factories is neither necessary nor practicable. Owing to climatic conditions in this country it would be difficult to maintain a standard of moisture with reference to manufacturing processes and the health of the operatives. Where there is a municipal supply of water available it is unnecessary to fix any other standard of purity for humidifying purposes. We do not consider it necessary to raise the standard of latrine accommodation to one seat for every twenty-five persons. A much sma ler proportion is found sufficient to meet all demands, and we consider one to fifty now prescr.bed by law as ample. There is no need to provide separate urinal accommodation, where latrines are constructed to suit the customs of natives. All doors should be hung so as to open readily outwards from the inside of the building in case of fire. Sliding fire-doors are excepted. Generally speaking machinery in spinning mills is already sufficiently well protected by fencing. We are of the opinion that uniformity in the Factory Act as enforced throughout India is highly desirable, but hard-and-fast rules are not practicable, as local conditions must be taken into consideration Efficiency would be better maintained if full-time inspectors were appointed to assist the present medical inspectors and occasional surprise visits would secure due observance of the Act. The physique of operatives does not appear to have been affected by factory life. This may be due in some measure to the casual way in which they perform their tasks whilst in the mills, and to the repeated holidays which they take whenever they feel inclined to absent themselves from work. Statistics as to this are appended We have one latrine provided for every fifty-four persons, and no separate urinal accommodat.on. There is no overcrowding. At certain seasons it would be difficult to weave without humidifying, and for the class of material woven in most sheds in India the blowing in of steam is almost a necessity. We consider that regular meal hours would, in time, be made use of for taking food. If Sundays were made compulsory holidays, nine days in addition would have to be given as native holidays. We do not know of any worker retiring in his old age upon his savings.

Monthly abstract of the miscellaneous department, 1906.

Number.	Name of month.	W. Days.	Present.	Absent.	Leave.	Special Leave.	Total.
1	January	27	322·36	6·87	7·65	..	336·88
2	February	24	316·77	5·46	4·81	..	327·04
3	March	25	329·4	10 92	10 2	·2	350·72
4	April	25	300·82	7·02	7·4	·24	315·48
5	May	27	296 38	9·62	17	1·44	324·44
6	June	26	289 25	7·5	6·85	·24	303·84
7	July	26	306 82	8·5	4·59	..	319·91
8	August	27	314·28	9·37	8·46	..	332·11
9	September ..	23	343·45	17·44	12·67	..	373·56
10	October	24	324·02	9 31	6	..	339·33
11	November.. ..	25	307·38	9·12	4·98	·24	321·72
12	December ..	26	295·33	10·33	9·69	·26	315·61

Monthly abstract of the carding department, 1906.

1	January	27	615	22·02	13·16	8·4	658·22
2	February	24	578·1	21·38	20·47	10·5	630·45
3	March	25	637·64	17·4	18·4	7·84	681·28
4	April	25	610·06	33·26	16·12	11·84	675·28
5	May	27	557·16	18·5	15·55	12·79	604
6	June	26	558·96	26	16·77	10·46	612·19
7	July	26	612·65	15·26	12·85	6	646·76
8	August	27	582·75	19·42	14·55	10·83	627·55
9	September ..	23	654·89	28·15	18 85	26·84	726·73
10	October	24	605 36	31·32	39·19	22·94	699·41
11	November ..	25	613·46	44·02	8·52	10·28	682·28
12	December ..	26	583·09	28·34	11·22	8·46	631·11

Monthly abstract of the spinning department, 1906.

Number.	Name of month.	W. Days.	Present.	Absent.	Leave.	Special Leave.	Total.
1	January	27	764·24	34·9	1·29	·75	801·18
2	February	24	706·64	30·37	2·12	1·82	740·95
3	March	25	769·48	37·12	3·4	2·32	812 32
4	April	25	636·46	44·08	5·9	1·48	687·92
5	May	27	665·48	67·92	5·12	3·55	742 07
6	June	26	709·42	58·58	1·62	1·03	770·65
7	July	26	656·67	51·34	2·34	1·3	811·69
8	August	27	821·33	67·55	3·45	2·59	894·92
9	September ..	23	676 71	129·89	8·44	5·43	820·47
10	October	24	587·12	112·46	79·46	8·04	787·08
11	November.. ..	25	614·02	80·64	3 6	6·34	704·6
12	December ..	26	627·69	39·59	3·53	2·61	673 42

Monthly abstract of the reeling department, 1906.

1	January	27	364·08	12 77	8 33	·48	385·66
2	February	24	367·37	11·77	6·42	1·89	387·45
3	March	25	384·62	13 4	14·1	1·84	413·96
4	April	25	360·12	20·74	14·02	·72	395·6
5	May	27	335·14	24·44	8·46	1·4	369·44
6	June	26	346·54	13·07	3 85	1·15	364·61
7	July	26	379·3	10·51	3 35	..	393·19
8	August	27	366·6	14 5	3·71	·74	285·55
9	September ..	23	401·3	21 45	6 05	1·6	430·39
10	October	24	361·43	37·89	2 6	4·08	406·
11	November.. ..	25	310·5	19 94	2·64	·48	333·56
12	December ..	26	291·07	12·5	1·03	·07	304·67

Monthly abstract of the weaving department, 1906.

1	January	27	737·65	79 44	17·49	7·63	682·21
2	February	24	782·79	65 04	32·89	8·45	889·17
3	March	25	809 98	101·24	18·94	10·8	940·96
4	April	25	711·9	86	25·36	8·5	831·76
5	May	27	715·82	66·8	32 01	10·04	24·67
6	June	26	723·63	94·88	23	3·94	845·45
7	July	26	713·27	143·64	16 2	6·73	879·84
8	August	27	694·96	94	19·19	17 86	826·01
9	September ..	23	820·16	108·34	20·97	41·22	990 69
10	October	24	679·65	92·39	19·42	27·39	818·85
11	November.. ..	25	809·96	77·64	18·96	17·12	923·68
12	December ..	26	841·28	27·59	16·68	6·11	891·66

Mr. Francis Horsman, of the Cawnpore Cotton Mills.

Mr. Horsman, representing the Cawnpore Cotton Mills. *Oral evidence.*

Witness stated that he had been for twenty years in Cawnpore, and had had previous experience in India and at home. For the last year they had worked twelve hours a day. The cold weather hours were from 6-45 A.M. to 7-15 P.M., and the hot weather hours from 5-30 A.M. to 6 P.M. Formerly they worked thirteen hours, and longer. He did not approve of long hours, as during the long hour days the men were slacker. He did not mean that they did not do as good work after the twelve hours as before, but all through the day they were slacker. The difference in the work did not take place when the lights went on. If the operatives knew they had to work long hours they adapted themselves accordingly, and went out more. He was of opinion that the Indian workman should not be employed for more than twelve hours a day, but he was opposed on principle to any legislative interference with adult male labour. On one occasion in April, when it was very hot, the men asked to be allowed to stop at 7 P.M. instead of 8 P.M. and the directors complied. Otherwise they had never complained about the hours. The heat was very trying in the mill in May and June, but they had fans to expel the hot air. While he could not express any opinion about a standard of purity of air, he believed that the purer the air the better the results obtained, possibly on account of the hands being more active in the improved atmosphere. Roughly speaking they employed three hands in India to one at home. An Englishwoman would attend to four looms, while in Cawnpore the majority of hands would only attend to one. Out of 900 hands only 286 attended to two looms. They would earn twice as much if they looked after two looms, but they seemed to have no desire to do so. A single loom man earned from R8 to R9 and a double loom man from R14 to R18. Witness had seen no improvement in skill, and considered that the Cawnpore male spinner was the same now as twenty years ago. Witness believed they did just as much work in the shorter hours as in the longer hours, while more men had to be employed for long hour working. There had been an increase of one-third ounce *per* spindle *per* day production in the ring frames in the twelve hours day as compared with the thirteen hours day, but during the twelve hours' day there had been a slight decrease in the production of the mules. Witness could not say that the conditions of work in the twelve and thirteen hours' days were exactly similar. He felt convinced that the mill had not lost through adopting the twelve hours' day. He thought that the gross production *per* spindle was as great now in the twelve hours as it used to be in the thirteen. The daily wages were not reduced, and the piece workers earned as much now as in the longer day. The mule earnings might have dropped a little, but on the whole the decrease in hours had not led to a decrease in wages, while the hands appreciated getting home an hour earlier. With the long hours there used to be 23 *per cent.* of absentees, and now there was only 5 *per cent.* He attributed this, however, partly to the famine, which caused them to be more regular in their attendance. The cost of production had not decreased very much with the shorter hours, because the famine had provided a large labour supply. He did not turn away hands seeking work and so they had now more hands than were really required. The mill, however, saved a great deal in waste. The hands did not go away to other mills. They had 166 half-timers, and there was a school in the compound. The law regarding the employment of half-timers was evaded. The situation of the school on the premises made it possible for the half-time system to be abused. He agreed that the manager was responsible. If a "young persons" class were created he thought that women should be included in that class and they would come earlier in the morning in order to leave earlier at night. Women were employed in the reeling, and he had never tried them on the looms, where most of the weavers were Muhammadans. So far as textile factories were concerned women should be prohibited from working at night. He had no experience of ginning factories.

WITNESS No. 137.

Mr. J. B. Sunderland, Cawnpore.

Mr. Sunderland. *Written evidence*

I represent the North-West Tannery Company, Limited, Cawnpore, tanners, curriers and general manufacturers of all classes of leather goods. The average number of persons employed in our factory for the six months ending November 1907 was as follows :—

Men	620
Women	2
Boys	72

This factory has never worked 12½ hours a day. We are unable to give the average daily number of hours during the past ten years. Our working hours are from 6-30 A.M. to 5-30 P.M., with half an hour's interval at midday. If certificates of physical fitness as well as of age be required prior to the employment of children on half-time, we think the child should be allowed to work for not longer than 30 days pending examination for the necessary certificate. In order to secure medical examination of children, we parade all the children employed by us at least once a month, and any children who may be found to be without certificates are at once put in charge of a *chaprassie*, and are without delay paraded before the certifying surgeon for the necessary certificate. We find that this system has worked well, being convenient to ourselves and convenient to the certifying surgeon (in this case the Civil Surgeon), and we are quite prepared to continue it. The medical examination of children could also be arranged on the following plan :—The certifying surgeon to attend at the factory once a month, previously giving notice of the time at which he will attend, so that the necessary arrangements can be made to have the children for whom certificates may be required to parade before him, thus avoiding any waste of either the certifying surgeon's or the children's time. Although opposed to the medical examination of children before being permitted to work as adults, we see no reason, if the former recommendation is accepted, why this latter one should not also be

carried out. We do not see how it is possible to prevent persons from 14—16 years of age, who are refused service as "adults" in one factory, from obtaining employment as "adults" in another factory. The factory worker will certainly not tell his prospective employer that he has already been refused a medical certificate to work for any other employer. If he desired to work he would also probably inform the person to whom he applied for employment that he was an "adult" and not a "young person." We are not in favour of the suggestion for the creation of a class of "young persons." We are strongly of opinion that such a class is not requisite in this country, as children mature very much more quickly than they do in Europe. Assuming that it is eventually decided to restrict the hours of adult labour, we think it would be preferable to fix a maximum number of hours, leaving it to the discretion of each individual employer to settle the time of commencing and terminating the day's work. The special circumstances of the industry in which we are interested demand exceptional treatment in regard to Sunday labour. The tanning of hides is a continuous process, and hides require daily and constant attention while in work, and a small percentage of Sunday labour is required in order to effect the necessary handling during tanning processes. The percentage of labour required is however only a small one. We do not approve of the suggestion that inspectors from the United Kingdom should be obtained for factory work in India. The factory inspector in this country in addition to the general knowledge required from such a person, must in order to be of any use have some knowledge of the country and the native, otherwise, want of this especial knowledge would be very apt to lead him to erroneous conclusions. Our suggestion is that in order to start a proper service of factory inspectors, they should be in the first place recruited in India, where men with the requisite qualifications are to be found. Eventually the service might be recruited in England when the younger men coming in at the end of the list would be able to have a thorough Indian training under their immediate superiors, in addition to the training they would have already received in the United Kingdom. We think it desirable that any law which it may eventually be proposed to introduce should contain a certain amount of elasticity in its actual provisions, to meet the various conditions in different parts of India. All such provisions of elasticity should be under the control of Local Governments. We have no suggestion to make as regards the housing of factory workers, and would beg to point out that we consider it to be the duty of the local municipality to see that the sanitary surroundings and water-supply of the factory-hands are sufficient and ample. With reference to limiting the working hours of adult males, it must not be lost sight of that the factory worker in this country, although commonly supposed to work long hours, does not actually work continuously the whole time. In this factory, we have never worked long hours, our average day being eleven hours, less half an hour's break at midday. We find that, even working these comparatively easy hours, our workers will take at least three intervals a day, very often five, which intervals they spend in smoking, gossiping and loitering in the compound, and we have come to the conclusion that the question of hours is not of vital importance, either to the operative or to his physique. The operative will do as much work as he thinks fit, and whatever hours your factory runs, you will not get more work out of him than he is willing to do. If he thinks he is being overworked, he will cease coming to work, and find easier occupation, even if he gets less money. In the majority of cases the amount of work that a factory-hand is willing to do is limited by his desire, or absence of desire, for luxuries, and by his requirements and necessities, which owing to his standard of living are, when compared with European standards, extremely low. We have many a man working in our factory who working full time regularly for a month can earn very good wages, much more than he requires for his necessities and luxuries, but it often happens that such a man, when he has earned sufficient for his monthly requirements, prefers to idle his time and stay away from his work. Occasionally it happens that a man will work well for seven or eight months, and then apply for leave to go to his native village and live on his savings, and when these are exhausted he will return to his work in the factory. The man who is paid by time desires to obtain his wage with the least possible labour, and will only do sufficient work to retain his employment, no matter what the hours of labour are. The conditions under which an operative works in our factory are much healthier and more sanitary than he experiences either in his own home or when working for native contractors in the bazar. In our opinion the physique of the worker does not and cannot suffer by working what to European ideas may seem long hours in factories, but his physique is much more dependent on his surroundings outside the factory, and the way he spends his time when not working. We are therefore opposed to any limitation whatever being placed on the working hours of adult males. Being opposed to the limitation of the working hours of adult males, we are unwilling to suggest any number of hours that might be fixed, but in the event of it being decided to recommend legislation to limit the working hours of adults, we would suggest that the Local Government, as represented by the chief civil authority in the district, should have power to give permission to work longer hours than the limit, if the factory applying for this extension made out a case sufficiently strong and of sufficient importance to have such permission granted to it. There are many reasons why this power should be granted, especially where the working of a factory as a whole depends on the continuous and harmonious working of several departments, and it would be a great hardship if owing to a breakdown in one department an owner were prevented from working that department longer hours than might be legal, in order to continue the harmonious working of his factory as a whole. We do not approve of working a continuous period, and no matter what working hours might be eventually adopted, there should be a break in the same. We have no information as to the physical deterioration of young adults, but it is patent to all employers of labour that not only physical, but mental, deterioration takes place soon after children commence sexual intercourse. We do not think it necessary to maintain a special register of all workers under the age of sixteen. It should be carefully noted that children mature very quickly in this country, and we cannot see that any object would be gained, either in the interest of persons under the age of sixteen, or in the interest of the factory-owners. Such persons would probably work somewhere, even if they did not work in a factory. The employment of women at night should be prohibited. We do not think the minimum age at which children are allowed to work in a factory should be raised beyond

Mr.

Mr Sunderland. nine, and we are strongly of opinion that it should be reduced to eight. If the parents of such children desire them to earn a living, they will have to work, whether they work in factories or not, and by raising the limit of age, you would deprive the factory-owners of such labour, and what in our opinion is of much greater importance, you shorten the time in which the factory-owner has an opportunity of training such children into skilled artizans. Our opinion is that if we can get a boy of eight years of age to train to our work, at fourteen we have a more expert craftsman than that boy would be at 20 if we took him at 12 years. We have found it very much more difficult to teach adults our work than to teach boys. We would be in favour of a certificate of both age and physical fitness being required before children are employed in factories, as there can be no question that a child, who is physically unfit, should not be allowed to work in a factory, both in his own interest and the interest of the factory-owners. We do not think that certificates either of age or physical fitness should be required for any child over fourteen, who has previously worked half-time. We think children should be allowed to work morning and afternoon, so that they might obtain the advantage of the midday break. Factory-owners should not be obliged to provide elementary education at their own expense for children working at their factories. We think a rule prohibiting non-working children from accompanying workers to dangerous or unhealthy parts of the factory desirable, but cannot see how such a prohibition can be enforced without entailing hardships on the workers, especially on women workers. The standard of latrine accommodation should not be raised to one seat for every 25 workers. If suitable urinal accommodation is provided, that is one latrine and one urinal seat for every 100 persons, such accommodation would be found ample. It is desirable that all doors of working rooms should open outward, but we do not think it necessary to legislate. We do not think further precautions for fencing machinery necessary. At present the factory inspector has sufficient power to order the fencing of any machinery which he considers inadequately protected. Uniformity of administration is desirable, but it may not be practicable, owing to the diversity of climatic conditions in various parts of India. Where there are sufficient factories to find employment for full-time medical inspectors, such inspectors might be appointed, but in places where the factories are few in number, such work can be carried out by the Civil Surgeon. For instance in Cawnpore, and neighbouring districts, there would not be sufficient work for a full-time medical inspector.

Oral evidence. Witness stated that they had never worked the factory, as a whole, overtime. Overtime was only worked in special departments to execute urgent orders, and electric light was only used on such occasions. They worked overtime perhaps eight or nine times a year, for a few hours on each occasion. Seventy-five *per cent.* of his labour was on hand work. If a restricted day were enforced he should like a provision to permit overtime work to execute urgent orders. A certain amount of Sunday labour was required in a tannery, and provision must be made for that. He found that his hands idled as much at his factory as in other factories, but the knowledge that they could leave when they had performed their daily task had had a good effect. A man in the boot department earned Rs. 12, a bag and trunk worker Rs. 15, and saddlers and harness makers Rs. 20 to Rs. 25. The half-timers earned from Rs. 3-8-0 to Rs. 4-8-0. The boys worked from 8 A.M. to 12 noon and 2 P.M. to 5 P.M., and the management was strict that the children should not work overtime. They had monthly parades, and if they found a doubtful case brought in by one of the workmen they sent the lad to the Civil Surgeon. A twelve hours' day would only affect them as to overtime; the "young persons" class would not affect them. They would continue to employ their young adults because there would be no use in getting rid of lads whom they had trained and naturally they would not care to see labour trained by themselves employed elsewhere. They worked the same hours in the hot and cold weather, and always allowed the hands half an hour's grace. They had a pass-out system, but it was not strictly enforced. The saddle-makers refused to take passes, and the firm could not harass them. The workmen were independent, because it was hand labour and highly skilled, and they could go elsewhere and earn their living. The men themselves regulated the going out. They took it in turn, and objected if a fellow workman went out too frequently. He should like the minimum age for a child to be reduced to eight, as a lad of that age could do half a day's work at their factory, and they wanted their hands young, when they were nimble and adaptable, in order to train them. The English operative did more work than the Indian operative. He had had no cases of anthrax in his factory. He wanted to be allowed to employ a child for one month, during which time he could be sent to the doctor. The Civil Surgeon was two miles away, and he could not send one or two boys just when they applied for work. It was desirable that some grace should be given to employers of labour during which they could get the children examined. In his case it was impossible to get each child examined before employing him.

Witness No. 138.

The Empire Engineering Co., Ltd., Cawnpore.

Empire Engineering Co. *Written evidence.* We represent the Empire Engineering Co., Ld. The average number of men employed is 600. We cannot state exactly how many days during the last 10 years our factory has worked over 12½ hours. The number of such days would be very small indeed. The average daily number of working hours for each year during the last 10 years has been between 10 and 11 hours. We do not consider that the working hours of adult males should be limited, and we do not consider that the physique of workers has been affected by the hours which they now work. In our trade, we find the workmen very independent, and they will not work long hours unless highly paid. The natural laws of supply and demand are quite sufficient to regulate and limit the hours of labour, in accordance with what the workers are able to do. We do not believe in any limitation of hours whatever. Should it be decided by the Commission that the hours should be limited, we think it will not be advisable to fix any particular time for commencing or finishing work, but simply to state the maximum number

of hours a day allowed. This also applies to the time of stoppage of the engine. We find it more convenient in the hot weather to allow a long stoppage in the middle of the day and to start work early and finish late; whereas in the cold weather, we allow a short stoppage in the middle of the day, and commence work later, and finish off earlier. We consider it better to leave such details to the discretion of the various trades and employers, who can arrange matters in accordance with the special requirements of their workers. As the result of illegal employment as adults of persons between the ages of twelve and fourteen, we have noticed no physical deterioration, and we do not consider any special legislation for the purpose is necessary. We think children should be allowed to come into the works with their fathers and learn their work. It is the best school available for them, and although they may stay in the works with their fathers the whole day, they would not actually work the whole time, and would live a much more healthy life than in their own houses. In our trade we do not consider that any special register is necessary for young persons. The employment of women does not affect our trade. We find the standard of latrine accommodation, namely, one seat for 50 workers, is quite sufficient, and we do not think any legislation is necessary for the purpose, as it is to the advantage of every factory owner to supply sufficient latrine accommodation, otherwise men would be idling round the latrines. We do not think any further precautions for fencing machinery are necessary. We find the factory inspector notices everything that is dangerous, and due precautions are always taken in accordance with his instructions. We do not think further inspectors of factories are necessary. The present inspection by the medical officer is all that is necessary. We think it advisable, and it is advantageous both to the factory and to the men, that the factory hands should be housed in houses belonging to the factory, but we do not believe in any legislation on the subject.

The Empire Engineering Co.

Mr. T. Gavin Jones, of the Empire Engineering Co., Cawnpore.

Witness stated that he employed no half-timers, and the restriction of adult working hours would not affect his works. They would require, however, in the case of a fixed twelve hours' day, a provision in the Act to allow special overtime working. On principle he objected to any interference with adult male labour. He worked overtime for about a month in the year, and on those occasions the works were running till about 9 P.M. If they found it necessary to work the factory for twenty-four hours they would do so by two shifts. If there was a break down job it was essential to work overtime, for which the men were paid extra, and it was to the interests of the employers to keep the overtime wages as low as possible. In the carpentry department the parents sometimes brought their young children in, and witness thought that this should be allowed. They learnt their work by observation. At present they did not begin to work until fourteen years of age. The actual working hours in the factory were about eleven, and they worked the same hours in the hot and cold weather. The electric light was only used for overtime. The hands had one hour's interval in the cold weather, and two hours' interval in the hot weather. The work was hard work, and the hands did not like too much overtime. Unless they wanted to work they would not be tempted to do so by the prospect of extra payment. They could not force the men. All overtime work was paid for at the end of the week. They employed all castes. The men do not work steadily all through the day like Europeans, but frequently take leave for drinking water, smoking, and going to the latrines. Many of them are absent for a day or two days at a time. If the total time thus absent were added up, it would amount to an average of one week *per* man *per* month. Working short hours, a full 9 hours' work could not be obtained from the men each day, owing to their indolent methods of working.

Mr. Gavin Jones, representing the Empire Engineer Co. *Oral evidence.*

Witness No. 139.

The Muir Mills Company, Limited, Cawnpore.

We would like to preface the replies we are making to the questions set by the Factory Commission with the remark that it will not be possible to frame laws which can in justice apply equally and uniformly to all factories in India wherever situated. Cawnpore differs as much from Bombay in climate, in its people, its castes, and its customs as Bombay, Calcutta and Madras differ from each other. Not only do these cities differ in these respects but factories themselves differ from each other. It would be manifestly unfair for example to apply the same rules to a factory that had large enclosed grounds, where the hands could take rest or recreation, to factories that had no enclosed spaces at all and in which therefore employés could without difficulty be shut in without opportunity of taking intervals of rest. We do not consider the working hours of the adult male in India should be limited or interfered with in any way whatever. But before this question can be properly replied to, the occupations affected should be stated. Universal restriction, whatever the employment, cannot be intended, because such a law could hardly be enforced, so that clearly it is only work in certain occupations in regard to which a desire exists to limit the hours of work of adult males, and it is manifest that it is the cotton operative in India who is mainly or principally concerned. Why? Lancashire does not limit the hours of work of its adult males: indeed a constant source of trouble among its Unions is that certain of their members insist on their right to work as long as they wish and will not submit to restrictions. In India limitation of the hours of work of adult labour must operate in one or other of two directions,—it must either increase the cost of production because the workman will expect the same wages for shorter hours of work, or—if he gets reduced wages—then he will seek more remunerative employment elsewhere. It is entirely overlooked (together with many other matters) that work in Lancashire cotton mills is highly specialized: a workman there cannot find employment out of his particular trade, and the Trades Unions are so tyrannical that very often a man cannot be employed even in an allied branch of his own trade. Consequently a workman earning what is called "good money" will not do anything or risk anything to lose his job. But in India there are no such

The Muir Mills. *Written evidence.*

› Muir Mills.

limitations; a man can cross the road and find work in any one of a score of capacities which will at all events give him his day's food, and if there is anything irksome in his employment, or even if he has only a desire for change, he will promptly leave. He will leave his employment without notice and without permission, feeling certain he will be taken back however long he may stay away, and be given arrears of pay—rightly forfeited—without demur. Then a very important point in connection with cotton mills is that they do not depend upon individual effort so much as upon the length of time a machine runs. An hour's stoppage of a machine is a very serious matter. Production is of vital importance to a cotton mill, and production does not depend upon individual effort so much as upon the length of time machines run. There are so many spare hands employed in an Indian cotton mill to provide for absentees that the absence of one or two men need not stop a machine, but if the hours of adults are limited the mill's producing capacity is of course permanently reduced. There seems to be an assumption that the factory hand works long hours. There is absolutely no foundation of truth in this assumption. It has been over and over again and repeatedly pointed out that the factory worker takes frequent intervals of rest which are not recognized in Lancashire. The Indian worker has no home life. he has no play ground, none of the attractions or inducements which in Western countries go to form what we know as home. All his "home" means is a place where his food is cooked and where he sleeps. The rest of his time he passes in the factory if he is employed in one, or in roaming the bazaars. In the factory he washes, bathes, washes his clothes, smokes, shaves, sleeps, has his food, and is surrounded as a rule by his relations. He has clean and warm (or cool) surroundings, and plenty of water: but the Asiatic labourer is incapable of continuous work, and however light his task may be he *must* have intervals of absolute idleness which are unknown to the vigorous European. So that though the mill engine may be running say 13 hours there is not a single male adult who works for anything like that period. There is no truth in the statement that factory hands 'work' long hours. We, like probably most factories in India, have tried various experiments in order to arrive at some conclusion as to the most efficient method of working with native labour. Short hours have always failed simply because, however short the hours, the Asiatic will take proportionately similar intervals of idleness and rest as he would if they were long, so that there is no benefit, and when the workman finds his wages are less than what he is accustomed to receive there is revolt. The first Commission on factory labour in India had frequent opportunities of seeing for themselves the large proportion of work-people who are always idling outside the mill, and ample ev dence has been produced before the present Commission to show that this is no exceptional circumstance. From our experience of the factory worker it is the opinion of those of our staff who are qualified to judge that the workers of to-day are better than they were 20 years ago; their wages are higher; their water-supply is purer; they dress better and take more holidays, and if their conditions of life and their environment have improved it is fair to conclude their health and their physique must have improved also. We think it is dangerous for any one to dogmatize on this point unless a body of workers who have worked continuously in a cotton mill for a fair number of years could be compared with a corresponding number of workers in some other trade or industry, all conditions being as nearly as possible the same, *viz.*, caste, age, sex, etc. It would be absurd for instance to commence with to compare Mahomedans—who eat flesh—with Hindus, who do not touch it. For anyone to say that the physique of mill workers has deteriorated unless he can base his conclusions upon observations of the character indicated appears ludicrous in the extreme, and altogether undeserving of serious consideration. We consider a limit of 13 hours would be a fair one for this part of India. We do not think the exact hours of starting and closing should be fixed; if it was fixed by law that no factory engine should run for more than 13 hours in the 24, and that there should be a stoppage at noon daily of at least half an hour, it would meet all purposes. Much has been said about the low standard of efficiency of the Indian worker: but few have opportunities of realizing how very low it is compared with the European worker, and as it is the duty of a Government to support its indigenous industries so it is our duty to show how the proposed reduction of working hours must cripple one of India's principal industries. Our working hours are 13 as nearly as possible all the year round, and in fixing a standard of efficiency for the yarn produced by our mules for example, we take 13 hours as the length of time the machinery runs. This we start off by considering as equal only to 12 hours; the stoppage of machinery due directly to the frequent absence of the hands employed thereon is we consider approximately equal to 1 hour out of the 13. A mule of a certain number of spindles on a certain count and travelling at a certain speed can, we know by calculation, produce 406lbs. of yarn in 12 hours. We deduct 1-12 of this for doffing, and in addition allow 5 *per cent.* for contingencies. This brings the outturn down to 350lb which we fix as a fair standard for which to strive, although such a machine worked in England would produce at least 400lb. But the best we can do against this reduced standard is only 75 *per cent.*, that is, out of a 13 hours' run we can only get the equivalent of 9 hours' work. This does not mean the man has worked 9 hours—it means the production is equal to only 9 hours' run, and that the attendant has worked considerably less time than that. How then can it be said that the Indian factory hand works long hours? The fact is that he works much shorter hours than the European, and if the 13 hours were reduced to 12, he would work proportionately a shorter time: he is physically incapable of continuous work and is slow and apathetic. If he can earn in 10 days sufficient to feed him for 20 days he will always stay away from work the remaining 10 days. It is possible there has been employment in some cases as adults of persons between the ages of 12 and 14. But it is exceedingly difficult to define with even approximate accuracy the ages of natives: the best guide is, we consider, experience and physique, but if a well made lad of say 14 is as capable of looking after, say, a roving frame as a man alongside him of, say, 30, why should he not do the work? All work in cotton mills is light, no portion requires great physical strength or great endurance; the proof of this is that women are employed in every part of a cotton mill in Lancashire. In India women are only employed in reeling, and there appears no reason whatever why in exceptional cases a lad who has not yet attained the age of 14 should not be employed on work which in Lancashire a girl of 18 would be set to do. If such a lad is not allowed to work full time he will work the remaining half time in another mill. We do not consider the creation of a special class of young persons in India either necessary or desirable. What will be the effect of legislation of such a nature? In the first place all the young

persons themselves would be opposed to such laws: their parents would be opposed to them, and all the resources of trickery and personation possessed by the workers would be brought into force against the mill management in order to evade them. Supposing such a class were created and their hours restricted, what would they do with their spare time? It would be utilized in getting employment elsewhere, perhaps in an adjoining mill. Such a law would only operate towards hampering mill managements and causing loss to mill hands: there would be no benefit to anybody because the rest the young worker is supposed to take would be made use of to do other work somewhere else. Night employment of women should be prohibited, and this should specially apply to ginning mills—they are not as a rule employed at night in cotton mills. We do not consider the minimum age for employment of children should be raised beyond 9, the present limit. In dealing with this question it appears to us there are two matters which require deep consideration. Supposing the age limit were raised to 10, or 11 or 12, what is to become of the children up to that age? It must be remembered there is no home life—no school life—no playing fields for the children of the labouring classes in India: they are put to work by their parents the moment they can earn the veriest pittance, and the question is, will they be fit for employment in a cotton spinning factory at 10 or 11 or 12? Children are almost entirely employed in spinning, and unless they commence early they can never become spinners, so that if they have been employed for 4 or 5 or may be 6 years in carrying bricks for instance, their hands will certainly be unfit for employment in piecing up delicate yarns, and meanwhile they have been deprived of a better means of livelihood than they can have possibly obtained elsewhere. Then the other matter is, what must be the ultimate effect of all these restrictions on the employment of children? If it were possible we believe not a mill in India but would be delighted if it could keep children outside its gates. They are a constant source of trouble and do great damage in a mill, but they are a necessity because it is from them that spinners are recruited, and if children were not taught when young the supply of spinners would be precarious indeed. So that in India all these restrictions must tend towards one end—they will drive children and young persons to other employment: they will force them to work where they will not be molested, where they can work as young as they like—when they like—and as long as they like. We look upon the restrictions as having but one tendency, and that is to cripple the Indian cotton industry and to inflict disabilities on the working classes which no European country would permit. It is not possible to consider these matters and shut one's eyes to the fact that they are all suggested by Lancashire. Why is it that Lancashire cannot get European spinners and weavers to see eye to eye with itself on the subject of the hours of labour—it is because the conditions are not the same and their people less skilled, and to come into line with Lancashire would mean to cripple their own home industries. Why is it Lancashire is so keen about children in Indian cotton factories when its own treatment of children was the subject of indignation in England itself not longer ago than last year? Why should Lancashire be so troubled on the subject of female labour, when it puts its own female work-people to do work which none but men do in India? We do not think that certificates of physical fitness are required. Managers do not desire weakly children in their mills and our own rule is to rigidly exclude either children or adults who appear physically unfit for work. We do not think certificates should be required before half-timers work as adults—the hands themselves will defeat any attempt in this direction by working in different places. No mill manager would allow a half-timer to do full-timer's work unless he was fully capable in exceptional cases of doing it, simply because there would be no benefit to the mills by doing so. We think it advisable if children are employed that they should be employed in sets, one in the morning and one in the afternoon. The obligation to provide elementary education for half-timers should certainly not be placed on mill owners. But what children would there be to educate—and for how long would it continue? If the minimum age of children is raised even only to 10 would elementary education be supposed to commence then? Is it possible that children brought up under conditions of extreme poverty and ignorance, accustomed to work for their own living for years, could be got hold of at the age of 10 and any kind of education imparted to them? Would any one of them tolerate it for an instant? There would be revolt and if it was insisted upon the child and all its relatives would leave.

The Mule Mills.

We know a case in which a factory set apart a large piece of ground and put up barriers between it and the working parts of the mill. Here it allowed any boy from the streets or having relatives in the mills to come in and play, going out and coming in entirely according to his own free will. At noon daily a good meal cooked by people of good caste was given free to every boy. The average age of the boys appeared to be from 5 to 6. The maximum attendance never exceeded 45, and after a very short time the numbers dwindled away and in six weeks not one was left. Here there was absolute freedom and a free meal, something that is more needed than education, and yet it failed to attract. The reason for the failure was that wages were also expected, and when wages were not given they left. There is no reason whatever why factories in India should educate children, but in my opinion the point is a negligible one—there would never be any to educate. With the example of Lancashire before them the wisdom of educating children who have also to work is doubtful. It is said that education of factory children in Lancashire is a failure, the children after working in the mills attending schools and then helping in household drudgery being unfit to benefit by instruction. There is not a mill in India that has not got strict rules prohibiting non-workers and specially children from going into any part of a mill dangerous or otherwise, and infringements are not overlooked, but it is quite impossible to altogether prevent it. The workers themselves do not understand why there should be such rules, and we do not see any way of enforcing obedience. Managers would be glad to be shown how it can be done. We do not think there is the slightest need to prescribe an analytical standard of purity for air in India. Mills in India are built on principles which admit the maximum amount of air and light, and there is always ample ventilation. Besides the air in a factory is immeasurably purer than what the hands have in their own houses. Nor is there in this part of India any necessity to prescribe a standard of moisture. We have a dry climate to deal with for 9 to 10 months, and moistening processes are not carried out to the extent they are in England. It is never possible in these parts to obtain a degree of humidity which would be harmful to the workers. The present latrine accommodation is 1 to 30, which has always been found more than necessary. Separate

he Muir Mills.

urinal accommodation has been tried and given up because it was impossible to keep them in a sanitary condition without large expenditure on supervision. We have found latrines with large and wide platforms and water laid on the most suitable.

The Muir Mills employ 1,884 men, 91 women, and 114 male children. We cannot give figures showing the effect of varying hours on production, but wish to say that the production is dependent on the numbers of hours the spindles are kept running. While a large percentage of the hands are loitering outside in the mill compound, the spindles are nevertheless kept running as far as possible by the hands left inside. Our experience has been that working shorter hours means less production. the reasons being that (1) it is on the machinery that production depends, and (2) that the factory hand in India does not work any the more vigorously for shorter hours, but continues taking in proportion the same intervals of idleness and rest as he does for long hours. We are opposed to certificates of physical fitness being required. No mill manager would employ any one physically unfit. And we have always acted on the plan of medical examination of half-timers before their names are put on the rolls, any delay leading inevitably to abuse. We can think of no safe-guards against the half-timer who is refused a certificate in his own mill, obtaining employment elsewhere. The people are against interference and will work how, when, and as long as they please in spite of any law. We are of opinion that it will be impossible to work with a class of young persons; it may be done in theory but not in practice. If a class of "young persons" be introduced with restricted hours of employment it will, in our opinion, enormously increase the difficulties of the mill owner, considering the great scarcity of labour that now exists, and will also, in effect, largely determine the hours during which the machinery will run. The "young persons" themselves will continually seek to evade the Act by giving ages outside the limit. And we cannot see how the ages are to be determined except by guess work. We can see no good to be gained by creating such a class unless worrying mill owners be considered a good. Guessing as closely as we can, we have 216 workers between the ages of 14 and 16. It will be preferable to fix a maximum number of hours, if hours are to be limited, and leave to the discretion of each individual employer the fixing of the times for starting and stopping. The times fixed for Bombay or Madras would not suit the United Provinces.

We do not ask for any exceptional treatment. We consider the cotton industry in India should be left to the guidance and control of the people of India and their Government. We deprecate interference by our rivals in Lancashire, and are of the opinion that every change and restriction now suggested or about to be introduced has been made by them to serve their own interests. We would respectfully suggest before any final decision is arrived at on any point that the labour laws of European countries be consulted. The conditions and classes of labour are quite different in India from what they are in the United Kingdom. We see no necessity for inspectors either being got from the United Kingdom or being trained in the United Kingdom. We think the law is sufficiently stringent as it is. To make it more stringent will only serve to increase the growing difficulties of mill owners without any compensating advantage Our experience is that factory hands prefer living in their own houses in the bazaar free from sanitary supervision and regulations for their supposed benefit—to all which they object. There is not the congestion and overcrowding in Cawnpore that there is in Bombay and Calcutta. There is therefore no housing problem here such as exists in the two latter named cities.

Mr. S. M. Johnson of the Muir Mills, Cawnpore.

r. Johnson. *ral evidence.*

Witness stated that a strict average working day for the whole year round, if calculated for the Muir Mills, would be under thirteen hours. They worked up to about 8 o'clock at night in winter, and these hours had been in force for a good number of years. If they had an amount of supervision which a cotton mill could not ordinarily afford, the outturn would no doubt be higher than without that supervision, but not sufficiently so as to compensate for the extra expenditure. It was the idling which caused the great loss in production. The Muir group consisted of three mills which were not situated close together, and it was impossible that the European managers could be everywhere. There could be better supervision in one compact mill. It was impossible to say how much time was wasted, because the workers knew when they were being watched. Personally he did not think that any operative actually did ten hours' work a day. He allowed seven men to a pair of mules, while in England there would be a spinner and two piecers. The hands did not tire towards the end of the day, and if they were in their own houses they would do more work than in the mills. Last year witness fixed a standard of production suitable to Indian workers and conditions, and informed the workers that they could leave immediately the day's standard was attained. He estimated that in a day 630lb could be produced of a certain count by certain mules. This estimate allowed for all stoppages, etc. The actual daily outturn was about 350lb. In another pair of mules, working 11's, he estimated the reasonable daily production at 900lb but only 673lb were produced. This test continued for two months, and gave a more or less accurate measure of the Indian operatives' work. Out of 28 mules he only obtained a total production of 6,804 lb, compared with a low reasonable estimate of 10,090lb. While working under these conditions the men knew that they could go as soon as they had completed their outturn, or had got reasonably near it, but this appeared to have no effect, and so the hours continued as long as they were previously. Fourteen years ago he worked the mill for eleven hours in order to test the outturn and compare the cost of production, but the experiment was not a success.

Cotton spinners as a class had increased in skill, but their habits had not altered, and the explanation in his opinion was the increase in wages. The habit of stopping away from work was more in evidence now than formerly. The Indian workmen had no thrifty habits, and if they could afford to stop away from work they would do so. In India high wages always meant bad work, but he would not say that the converse of that proposition was true. Low wages did not mean good work. The labouring classes had few wants, and the higher wages paid enabled them to have a large surplus after meeting those wants. They then remained away from work until the surplus was expended.

Mr. Johnson.

It was a mistake to pay high wages in India as they were an inducement to idleness. The operatives did not absent themselves from work because of the exhausting nature of the work. With the increase in wages the number of absentees had increased. Four years ago, at a Cawnpore Chamber of Commerce meeting, he put the absentees at from 8 to 10 *per cent.* and now the figure had reached 18 *per cent.* The attendance at his mill for last month showed 18 *per cent.* of absentees. This was based on the sanctioned strength of the mill, which included a number of extra hands to take the place of absentees. In his opinion it would not be correct to deduct the extra hands from the working complement before arriving at the percentage of absentees. They were 18 *per cent.* short in the actual running of the mill. Out of 1,580 hands in the weaving department, only 1,152 were present on the first day of January. That meant that some looms were always idle. They did not, however, want a full complement on every day, because the full complement included expected absentees. The weavers generally could only look after one loom; only about 300 men in his mills were able to work two looms. A fixed twelve hours' day would affect them injuriously. He did not believe that a mill could work for twelve hours and turn out the production of thirteen hours except with a great amount of supervision, more in fact than a cotton mill could afford to bear. The hands would also resist strenuous work. A European to every room could be obtained, but it would mean too extravagant working. He could not explain why loitering had been stopped in the Cawnpore Woollen Mills. The age test was a difficult matter. He had examined hundreds of boys and had passed some whom the doctor would have rejected, while he would have rejected some whom the doctor had passed. Witness went by physical development, height, etc., while the doctor went by dentition mainly, which was not always reliable. Formerly they used to examine the boys themselves, but there was some importance attached to having a certificate, and so, for the last eighteen months, all boys had been examined by the doctor. He had a suspicion that a good many half-timers in Cawnpore mills did work full time, but the practice was not general, and it was not in force in their mills. On their ring frames they should have 172 half-timers, but their best attendance that month was 140. The industry had increased in Cawnpore of recent years; not in the form of new mills, but in extensions and increased spindle power. Half-timers, if employed for the day, obtained a full day's wage. Their names were placed on the pay sheets, and the wages drawn, and it was impossible for the management to go through each name in order to detect a possible half-timer. They had no system of providing labour corresponding to that of the jobbers in Bombay. There certainly was corruption in the mill, and something had to be paid by the workers to the *mistris* for employment, but he did not think it would be to the interest of the *mistri* to employ half-timers instead of adults. The illicit commission was usually only on the first month's pay, but he had had some reports of monthly payments. He did not think it was to the interest of the *mistris* to keep the mill short handed in order to have the manipulating of the half-timers' overtime. He had been told that in order to get a loom a hand had to pay the overlooker something, and so it was to the interest of the overlooker to keep on constantly changing his hands. Witness did not think that the *mistri* "rung the changes" on the company by manipulating on the pay sheets the hours of the half-timers who had worked full time. There was inpersonation on pay days, and people's names got on the pay sheets who had not worked in the mill. Every effort was made to detect and stop such practices. Witness could not speak definitely about a standard of purity of air for mills. He could quite understand why it is was desirable in Bombay, but the conditions were so different in Cawnpore. He had tested the air in the his mills and found it very pure. If the question meant that an inspector would come to his mill and take a sample of air without expense to the mill, then he had no objection to such a proceeding. He had not provided houses for his hands, but there was a limited number of houses in the compound. He had tried schools, but found them a blind, as it was impossible to prevent the overlookers from taking the children into the mill. The school was abandoned entirely. He approved of education everywhere, but considered there was no reason why mill owners should be selected to educate their half-timers. The question of having a school in Cawnpore for the children was now under the consideration of the municipality, and no doubt the mills would give facilities. He objected, however, to being compelled to provide education for the mill children, or to incur any expenditure for that purpose. He did not approve of the half-timers' age being raised, as the children of the working classes of India were put early to work, and if they did not work in a mill they would do so elsewhere. If the age were raised it would intensify the child labour problem, and make matters worse for the children as well as for the mills.

Witness No. 140.

Shriram Mahadeo Pershad, Cawnpore.

Shriram Mahadeo Pershad. *Written evidence.*

We represent the Shriram Mahadeo Pershad Cotton Ginning and Flour Mills and Cotton Pressing Factory, Harrisgunge, Cawnpore. Forty males and 10 females are employed in the cotton press factory, and 55 males and 35 females in the cotton ginning and flour mills. The ginning mill works from 1st October up to 15th April each year. Flour mill works throughout the year irregularly. The cotton press works from 1st November up to 28th February irregularly each year. The ginning and flour mills work from 6½ A.M. to 7 P.M., and the press factory from 7 A.M. to 6 P.M. The average number of hours is 12 for a person employed in a ginning mill or press factory. They have an interval of rest for half an hour from 12 A.M. to 12-30 P.M. Ginning mills and presses ought not to be brought under the Factory Act for the following reasons:—Very little work is done in cotton ginning and press factories, and they are nothing in comparison to cotton spinning and weaving mills. Sometimes they remain totally at a standstill when the crop fails. Women should on no way be allowed to work at night, because they are of tender health and cannot remain awake the whole night. The line shaft should be fenced by railing, and should not be encased between the drums, as this latter method would be more expensive. Women should be prohibited from working

Shriram Mahadeo Pershad.

in front of the opener in a press factory. A wood plank should be applied in front of the opener in order that no stone or fire accident may occur. A fire broke out in our ginning factory in November 1903. The working hours of adult males should be limited; the health of workers is affected by long hours. Twelve hours should be fixed for daily working; and in case of non-compliance, the proprietors should suffer some sort of penalty. It would be advisable to prescribe—

(1) that except when working by shifts, the legal working hours should be from 6 A.M. to 6-30 P.M.,

(2) that the engine should be stopped for half an hour from 12 A.M. to 12-30 P.M.,

(3) that in factories working on the day shift system the legal working hours should also be from 6 A.M. to 6-30 P.M. The midday interval from 12 A.M. to 12-30 P.M. is suitable.

The minimum age at which children are allowed to work in factories should be raised beyond nine. Certificates of both age and physical fitness should be required before children are allowed to work in factories, also when they go to work full time as adults, instead of half time. It should be prescribed by law that children shall not be employed except in regular sets whether morning and afternoon sets or double sets. Factory owners should be obliged to provide elementary education at their own expense for children working in their factories. A rule must be laid down prohibiting non-working young children from accompanying workers to dangerous or unhealthy parts of factories. Such a prohibition should be enforced through the mill manager or engineer in charge. An attempt should be made by testing samples of air taken from factories in India to prescribe an analytical standard of purity for air, in factories, with a view to secure proper ventilation. A similar attempt should be made to prescribe a standard of moisture for the air in factories, with reference both to manufacturing processes and to the health of the workers. A standard of purity should be fixed for the water used for humidifying purposes. The standard of latrine accommodation should be raised to one seat for every 25 workers, and the provision of separate urinal accommodation should be insisted on. It should be prescribed that all doors of working rooms shall be hung so as to open readily from the inside outwards, in case of fire. Arrangements should be made to secure uniformity in the administration of the Factory Act throughout India. Full-time medical inspectors of factories should be appointed to assist the present inspectors in securing the due observance of the Act.

ral evidence.

Witness stated that he owned a ginning factory, press and flour mill. He worked his flour mill along with the ginning factory. At present they were working for twelve hours, but they sometimes worked for twenty-four hours with two shifts, and occasionally up to 8 P.M. with one shift. The gin and flour mill were worked by the same engine. If they ran the mill at night they had to employ females when male labour was not available. They tried to obtain male labour for night work, but were not always successful. He approved of women being prohibited from working at night in gins. They ought to get as many men as possible, and then close down those gins for which male labour was not available. He had had no accidents in his factory: once there was an outbreak of fire at night, and heavy damage was done. While he did not employ half-timers a few children sometimes came in by mistake. All hands were paid direct; but hands engaged by the labour contractor, and working with him, were paid by him. The application, or otherwise, of the Act to gins was a matter entirely for the Commission to decide. He had a single opener, but it was outside the gin and there had been no accidents from its use. The opener was run by men. There was no pool for the Cawnpore gins, but the presses pooled their profits. Sometimes the press pool arrangement broke down.

Witness No. 141.

Lieutenant-Colonel G. H. Baker, I.M.S., Civil Surgeon of Cawnpore.

..-Col. Baker. *ritten evidence.*

I do not think there are any statistics from which reliable conclusions can be drawn as to the health of mill hands, as compared with the condition of others of the artizan class who work elsewhere. Systematic observations to furnish such data would need to be comparative and simultaneous, and they would have to be made on large bodies of workers of approximately the same standard of health, over a term of years; these postulates render such a course impracticable. General statements from a casual observance of even a large number of individuals employed in factories I regard as unsafe and inconclusive. I can offer no evidence that their general health is inferior to that of the ordinary urban population, nor am I aware of any disease which mill hands are specially prone to. But although it is not possible to say that the long working hours of factories have a harmful effect on the health of individuals, it may safely be assumed that laborious work for anything exceeding twelve hours daily, in confined workrooms, and under conditions obtaining in many manufacturing processes, will, in the course of time, produce a constitutional state prejudicial to the well-being of adults and their offspring. I would limit a day's labour to twelve working hours, with a stoppage of the engines at mid-day, leaving it to mill managers to fix the exact time. Unless the engines are stopped the provision of a mid-day rest becomes a farce. The creation of a special class of workers, "young persons," is not called for. It would be irksome to the employers, and would do no material good. A youth of fourteen who earns good wages, and who is able to feed himself well, should be equal to a twelve-hour working day. In respect of the employment of women, I contend that they should only be permitted to work between the hours of 6 A.M. and 6 P.M., deducting from this the mid-day stoppage. This is not excessive, bearing in mind that the women ordinarily employed in mills are recruited from the cooly classes, who are inured to strenuous work by force of circumstances. The skilled female artizan so largely in evidence in many factories in the United Kingdom I do not

think exists in India. The evil of employing women during night shifts is apparent, when it is remembered that they are mostly mothers of young children. That helpless infants and toddling children should be deprived of a mother's constant care during the day is bad enough; it becomes almost inhuman to permit the neglect at night when maternal succour is not denied even the lower animals. The subject of the employment of children has occupied my attention very closely, and I have often considered in what manner the abuses which undoubtedly exist could be best remedied without inflicting any hardship on employer or employed. The Indian Factory Act of 1881, amended by Act VI of 1891, limits the hours of work to seven each day between the hours of 5 A.M. and 8 P.M. Most factories in Cawnpore work more than twelve hours a day, so that for children the working day could be divided into two shifts, if it were desired to employ two sets, though no overlapping of shifts should be countenanced. I have thought that if it were made compulsory for owners of factories to maintain two registers (one for each shift) to be written up daily, setting forth clearly the names of the children and the hours between which they worked, a surprise visit would reveal whether any child were working during unauthorized hours. To carry out this plan successfully it would be necessary to empower the medical inspector to call a parade of all children on the mill premises at the moment of his visit. The presence then of any child of one shift, during the working hours of the other, would be conclusive proof that more than the statute number of hours of labour were being exacted. His presence could be explained in no other way if the children of one shift were seen outside the gates before, or at the time, the second shift commenced. In all cases where children are employed it should be incumbent on the mill authorities to specify the exact hours (the statute number) that children were employed, and they should not be allowed in the compound outside these hours. In no other way can the overworking of children be prevented. I would not raise the minimum age of children from nine years; it is much more desirable to check the abuse of overworking. Concerning the certification of children the Act as it now stands is somewhat vague. When I assumed charge of the post of medical inspector of factories, Cawnpore, it was the prevailing notion that certificates were not obligatory, because rule No. 10 of Government Notification No. $\frac{1200}{\text{III—301 B.-177}}$, dated the 6th May 1893, directs that "The certifying surgeon will grant certificates when called upon to do so under section 5 of the Act." I have since been able to persuade the owners of most factories of the expediency of obtaining certificates for all the children they employ, and prosecutions in cases where workers under nine years of age were discovered emphasized my advice. The 28 registered factories at Cawnpore employ about 1,200 children. It would be well to dispel any misapprehension there may be on this point by framing a rule making it compulsory for all children to have certificates. In estimating the ages of children between the ages of nine and fourteen years the liability to error is small. It is the period of eruption of the permanent teeth, and the age at which each appears is fairly constant. From general observations I incline to the belief that the age at which the permanent teeth appear in Indian children is somewhat earlier than for Europeans, but the difference is not great and can be neglected. The form of certificate granted might be amended very advantageously to show that the child, in addition to being of the required age, was physically fit for employment in the particular factory, he was presented by

Lt.-Col. Baker.

" , son of residing at

is in my opinion about years of age and is physically fit for employment as in the mill (or factory)."

I believe this alteration to be of paramount importance. The education of children employed in factories is surrounded with many difficulties. It is a debateable question whether the seven hours' labour demanded from them is not enough serious occupation in one day without introducing compulsory education. I think that it should be borne in mind that for an artizan mental training, though important, must be considered as secondary to manipulative skill, and I am of opinion that the range of instruction, if any, should be limited to a knowledge of reading and writing the vernacular, with an introduction to arithmetic sufficient for ordinary business calculation. To educate the craftsman to a degree whereby he may become discontented with the work of his forefathers, and so aspire to other than manual labour, may be mischievous, and instead of increasing his efficiency be the means of withdrawing him altogether from his art. I certainly would not burden mill-owners with the education of the children they employ. I do not think any good result would follow the adoption of a standard of purity for air, and a standard for moisture, because it would be all but impossible to attain to these in practice. No help could be expected from the workers, who even now in the cold weather wilfully block ventilation where it is at all free in order to prevent draughts, and to raise the inside temperature. The water which is the source of the vapour distributed by humidifiers should most assuredly be pure, and should be of the same good quality as the drinking water. If mill managers were required to have an analysis of the drinking water supplied to their operatives made periodically, and to certify that this water only was used for humidifying purposes, a sufficient guard against aerial pollution would be secured. The number of seats provided in latrines at present, two *per cent.*, is I think sufficient. I have never seen any nuisance or inconvenience, because latrine accommodation was inadequate. But little interference is indicated, so far as I can see, concerning the opening or closing of doors of workrooms. This subject receives special attention from insurance companies who, for the most part, insist upon sliding doors of sheet iron. The factories that I am acquainted with have very few doors on hinges. It would be prudent to insist that the doors of common entrances should open outwards. Machinery is now fairly well fenced, and successfully so, to which the small number of accidents bears testimony. It is very, very rare in Cawnpore for an accident to occur that is not due to stupidity or wilful neglect, on the part of the injured, of ordinary precautions. The special inspector of factories gives close attention to this matter. Uniformity in the administration of the Factory Act throughout India is distinctly a desideratum. Rules should be framed in accordance with the spirit of the Act to be in force everywhere in British India, as I know of no local conditions connected with any industry to prevent their universal application, or necessitate their modification. General principles are the same in all parts

Lt.-Col. Baker.

in the matter of public health. Exceptions could always be made after the necessity had been shown. I cannot conceive that the appointment of whole-time medical inspectors would in any way facilitate or improve the working of the Factory Act. The rules now guiding the medical inspector cover nearly every matter of importance, and in my opinion could not be more effectively applied by any inspector. It is essential, however, that mill managers should thoroughly understand that all provisions of the Act are to be sedulously observed, and that continual infringement of rules will inevitably carry the penalty prescribed. If any strengthening of the staff for medical inspection should ultimately be considered advisable, the appointment of one such whole-time inspector, to accompany the special inspector of factories on his tours, would meet the situation. It should be his duty to examine the quarterly reports of the local medical inspector (the Civil Surgeon, as heretofore, because his special local knowledge cannot be dispensed with) and after consultation with him to communicate directly to Government whether or not the hygienic measures laid down by the Act are successfully worked. This officer should be a member of the Indian Medical Service, with the emoluments of a jail superintendent, or superintendent of a lunatic asylum. The appointment could appropriately be filled by an officer of the proposed sanitary service.

Oral evidence.

Witness stated that he had had five years' experience of factories in Cawnpore and some experience in Agra. Constitutionally there was no marked difference between the Cawnpore and Agra hands. The examination of children was solely for age, and the question of physical fitness did not arise at present. He considered that mill operatives were about the same standard, as regards health, as labourers in outside employments. There was a station hospital, but each mill had its own dispensary. He had not noticed any cases of phthisis or scrofula among the mill hands. If he had the option he would reject 5 *per cent.* of the children who came to him for age certificates, as physically unfit for work. He would do so on the grounds of bad development, eye disease, and lack of nutrition. Some eye diseases were distinctly contagious and could be communicated to other people working in the mill. Those who were rejected could obtain a living on the land. He considered that the child rejections would be more numerous in Cawnpore than in Agra, as the half-timers' standard in Agra was distinctly higher than in Cawnpore. It was customary to employ half-time children for full time in the Cawnpore mills. So far as half-timers were concerned the Factory Act was not observed at all in Cawnpore. It was part of his duty to see that those provisions of the Act were carried out, but the law never had been enforced. He had considered the question many times; and now, as the question of child labour was the subject of special enquiry by the Commission, he had resolved to take no steps pending the report of the Commission. So far as he knew this neglect of the law had never been reported directly to Government. His reports went to the District Magistrate, and from the latter to the Commissioner. Witness had not called the attention of the District Magistrate to this illegality, on the ground that the Commission was considering the question and would effect a settlement of it. He had spoken to the mill managers about this abuse of the half-time system, and they replied that although the children were inside the mill for the full hours, yet they were allowed special indulgences in respect to play hours during the day. Witness considered that a half-timer could not do a full day's work, and the seven hours allowed by law were quite sufficient for an undeveloped child. One was forced to the conclusion that the health of the half-timers was injured by these long hours. Concerning mill operatives generally, he considered that their development had been permanently arrested by reason of city life, bad environment, and hard factory labour. In his opinion the cultivator's life was unquestionably the more healthy. Physically, agricultural life might be harder than factory life, but it was not so wearing, and did not tell so adversely on the individual. From his experience of jails he gave no prisoner weighing less than 110lb a hard day's labour. A hard day's task consisted of grinding fifteen seers of corn in about eight hours. Witness' impression, based on his recollection of conditions a little over five years ago, was that the half-time system was similarly abused in Agra, and the explanation was that the law never had been enforced. The grounds for rejecting children would have to be left to the examiner. It would be impossible to tabulate a series of disabilities. There was not a large amount of phthisis in Cawnpore, but diseases of the spleen were common. A moderately large spleen was no bar to factory employment. Witness had never visited factories late at night. He approved of restricting the working day to twelve hours, though it would not be unfair to ask for nine hours' actual work in a nominal thirteen hours' day. He had not seen any cases of exhaustion due to working in the hot weather. He approved of women being allowed to work for twelve hours, as in many cases they worked harder at household work than they would in a factory. As a rule the sturdier women took to outside work, and this might account for the apparently low physique of factory women. He was of opinion that with proper supervision the double set system could be worked without evasion of the law. Mill-owners had been prosecuted for employing children under age. Some time ago certain employers did their own examination of children, but witness brought this to the notice of the District Magistrate, who stopped it. Witness examined between 1,500 and 2,000 children a year, and they now come to his office as the Government had ordered thumb impressions to be taken. He received four annas fee *per* head, but some mills paid him six annas as an inducement to him to make the examination at the mill. Often he did not know whether his reports were acted upon until his next inspection, and he thought it would be better if he received some intimation concerning the fate of his recommendations. He considered that the Cawnpore mills were well ventilated, and it would be easy to enforce a standard of purity of air. He saw no objection to the "young persons" class working for twelve hours, but his object was to shorten the hours of adult labour. If adults were to be allowed to work more than twelve hours, then he approved of the creation of the "young persons" class. He much preferred, however, a restriction of all labour to twelve hours, and this would include the young persons. There was no excessive drinking amongst mill hands.

Witness No. 142.

Lala Juggi Lal, Cawnpore.

Lala Juggi Lal. *Written evidence.*

I represent the Baijnath Juggi Lal Ginning and Pressing Factory. The number of men employed is 87, and there are 40 women. Children are not employed. Ginning mills commence work in October, and stop in March. The ginning mills work 23 hours during the day and night, and often 11½ hours only in the day The press works from 8 to 10 hours. In our ginning mill we have the shift system, one lot working from 6 A.M. to 6 P.M. with ½ hour rest from 12 noon to 12-30. The second lot from 6 P.M. to 6 A.M The press at present is working 8 to 10 hours. As the ginning factories and press only work from five to six months in the year, they should not be brought under the Factory Act. We do not approve of women working at night, but as they find the work easy and desire to be employed at nights we do so. Further, we find women more suitable for this class of work than men. We do not think any special provisions are necessary for ginning mills and presses. Where the line shafting is only a foot or so off the ground, we certainly think it should be properly fenced. Women should be prohibited from working on the opener. We have never had any accidents from stones being hurled out from the opener, as we employ two men to separate the *kapas* before feeding the machine. We have had no accidents in our ginning mills and press.

Oral evidence.

Witness stated that he was the owner of a ginning and press factory. The gin worked day and night, with separate shifts of men; females were also employed at night. He has 32 gins and employed 38 females for working them. Women should not be prohibited from working at night. If they were it would be difficult to find sufficient male labour, and probably night work would have to be stopped. His gins were working that year for twenty-two to twenty-three hours a day. The women earned 2¾ annas for day work, and 3½ annas for night work. The men earned from 3 to 4 annas a day and 4 to 5 annas for night work. Some years labour was scarce, but this season they had obtained all they wanted. In seasons when labour was scarce they had to offer high wages.

Witness No. 143.

Dr. Charles A. Fuller, Cawnpore.

Dr. Fuller. *Written evidence.*

In the factories of Cawnpore to which I am medical officer there is practically every class of operative to be met with in India, namely, those working in cotton, wool, sugar, leather and grain. With these I have had considerable experience, extending over a period of fourteen years. In my opinion the class of men, women, and children who work in these factories are quite as healthy as any working in the city itself. In most of the large mills there is a native dispenser kept, who has a dispensary, and who is competent to treat the ordinary ailments that may arise. This man keeps a register of all cases treated by him, the details of which I shall be pleased to lay before the Commission if required. These show some interesting facts, more particularly that the great proportion of cases are simply minor illnesses which a few doses of medicine cure,—which proves, I think, to a great extent the average good health of the working staff. In my opinion the average physique of those working in the factories is in no way below that of others working in the city, and I can see no reason why it should be, as in the building of these factories great attention is paid to general sanitation, the rooms being well ventilated, roomy and well lighted. There is a marked absence of any special disease amongst the factory operatives. The greatest possible care is taken in all factories that children employed shall not be under age. In my opinion the average number of latrines, 1 for every 25 workers as suggested, is much too high; 1 in 50 is ample.

Oral evidence.

Witness stated that he had been for fourteen years medical officer to some of the Cawnpore mills. In the city itself there was a good deal of phthisis, but this disease was not prevalent among mill hands. Witness had prepared a statement for some of the mills showing the number of mill operatives who had been treated for fever, diarrhœa, dysentery, plague and other diseases, but he could not give the Commission any opinion as to how these figures compared with those for an equal number of the ordinary population. He thought, however, that his figures would afford some indication of the amount of sickness among mill hands. They could be relied upon, because in those parts the workers thought a good deal of English medicines, and often preferred being treated by the mill dispenser—when they could obtain English medicines—to going to their own bazaar doctors where they were supplied with native drugs. Five deaths from phthisis out of forty-two deaths in the McRobert settlement gave a high percentage; but the settlement had only been recently started and, in his opinion, these cases came in to begin with. If the statistics were carried on the percentage of these phthisis cases would decrease. He had no returns for the other model dwellings. Eye disease was prevalent among the young children. They did not catch it in the mills, and if mill life were prohibited for them they would be just as likely to catch and spread it in the bazars. If such children were prevented from entering factories only a small percentage would be affected. His experience was that the children now were decidedly healthier than when he first came out, while the adults were better fed and clothed and were altogether in a better condition than they were twelve years ago. He considered that the cultivator was a better class of man physically than the mill operative, as it was more healthy to work in the fields than in the mills. It was difficult to make a comparison, however. Witness was surprised at so many cases of spleen being found in one mill, as enlarged spleen was not common in Cawnpore. It might be that the hands came from a malarial part of the city. He had been in the mills at 8 o'clock at night, and had seen the hands leaving their work. In his opinion the adults were by no means exhausted, and the children were full of spirits. They were not tired on account of the work performed. The half-timers did not come within his sphere,

Dr. Fuller.

but he knew that the children were in the mills the whole day. They spent the greater part of their time in play. Witness had nothing to do with the examinations for age. He had not noticed any tendency to drink among mill hands, and he should say that there was very little drunkenness in the town itself.

Witness No. 144.

Mr. Z. Meli, Messrs. Volkart Brothers' Agent, Cawnpore.

Mr. Meli.
Written evidence

The Jumna Ginning and Pressing Company, Limited, the local management of which is in the hands of Messrs. Volkart Brothers' Agency, employs at its Cawnpore ginning factory about 100 men and 65 women every day, and similar numbers of operatives every night, if heavy pressure of work has to be faced. Children are not employed, and should, in my opinion, never be employed inside any ginning factory or cotton press. Here the ginning season generally extends from October until March or April, according to the condition and size of the crop, but it may happen that an exceptionally heavy crop cannot be completely dealt with until the monsoon rains set in. During the high tide of arrivals the ginning mills have to resort to night work every year, employing one day shift and one night shift. Cotton presses are generally closed at night. The coolies are employed for 12 hours *per* day, whether they be on day or night duty, and they are allowed intervals of rest in this time, as prescribed by the Indian Factories Act, 1881. They also take short intervals of rest during steam-hours, and I estimate the hours of actual work at not more than 9½ to 10. I can only give my qualified approval of the proposal to bring all ginning mills and cotton presses under the Act. Sundays and Christian holidays are not observed by the working classes, and the markets being open and business transacted, there seems to be no reason why gins and presses should be reduced to inaction. The work of these factories "by its nature cannot be carried on except at stated seasons, and at times dependent on the irregular action of natural forces," and consequently there should be no restriction of work whatever. Women should not be prohibited from working in gins at night. There exists a regular system, devised by the operatives themselves, according to which certain families or individuals belong to certain gangs and shifts, and as these people take very good care of their own selves, and their household duties, neither the women nor their families are exposed to any hardship or suffering under present conditions. The women are always in a position to choose between night and day work. The prohibition of the employment of women on night work would adversely affect the latter by the loss of wages, and would also affect the gin-owner in the shape of increased working expenses. It is very doubtful whether an efficient substitute for women would be forthcoming, as men who are physically fit for work at a gin can earn good wages during the day, and will not work at night. This reason, in conjunction with the almost chronic labour scarcity under which the gin-owners already suffer more severely than employers who can offer regular, as against periodical, employment, might cause the cessation of night work. As a result, the ryot would not be able to turn his crop into hard cash as quickly as hitherto; his crop would be exposed to the risk of the weather much longer, and the retarded deliveries would cause a dislocation of the cotton trade. Assuming that it is decided to apply the Factory Act to all ginning mills and cotton presses, it should be clearly understood that people engaged solely in picking and cleaning damaged and yellow-cotton in the compounds and non-communicating godowns of such factories are not, owing to the nature of their work and to the fact that they never enter the factory, "employed" within the meaning of the Act. The people, also, being mostly women and children, are very frequently not employed by the factory owners, but by their constituents, and the law should not be applied to people over whom the factory owner exercises no control. I do not think that any other special provisions modifying the general law would be necessary, but these factories should all be given the benefit provided by section 5 B, clause (*c*) of the Act, for reasons already stated. I have no objections to put forward against the casing of line shafts between the drums. It is quite correct that in some ginning mills these shafts are inadequately fenced. Here I would draw special attention to the fact that line shafts hanging only from four to seven feet above ground, without being separated from the seed tunnels by masonry walls, are extremely dangerous, and should be altogether avoided. They are difficult to fence, especially the pulleys with the straps. A certain number of coolies, men or women, are nearly always employed in the seed tunnels, and they *will* move about under the revolving shaft as long as this is not built in between two separating walls with only a few openings for the use of the engineering staff. Cotton openers are not used here, and the *kapas* openers which are to be found in almost every ginning mill are not dangerous to work. No accidents have occurred in this mill during the last five years. I would suggest that the use of wooden casings for electric wires inside ginning mills and cotton presses should be made compulsory, as they reduce the risk of sudden and possibly disastrous conflagrations caused by short circuits.

Oral evidence

Witness stated that there were forty-eight double-roller gins in his factory, and in addition to the regular female hands they employed 10 *per cent.* extra to act as reliefs, both day and night work. Perhaps once or twice in the season they might work longer than twelve hours, with one shift; but ordinarily they worked from 6 A.M. to 6 P.M. A restricted twelve hours' day would not affect them, so long as they were allowed to work with two shifts, one during the day and one at night. He paid 25 *per cent.* extra for night work. His factory was under the Act. Witness thought that the Sunday holiday should not be fixed, but that ginning owners should be allowed to close on two or three consecutive days during the month, when the work was slack, or as opportunity offered. The inspector of factories came twice in the season, and he did not object to the presence of children employed in the compound for picking the *kapas*. On one occasion the Civil Surgeon told witness that those children ought to be included in his return, but he objected on the ground that they were not employed by him, and were not under his control. The question had been left an open one. He had tried to work his gins at night with men only, but a sufficient supply of male labour was not forthcoming.

It was a woman's job and a prohibition against women working at night would hit the gins very hard. He himself did not like children coming into the factory. His firm had gins at Delhi and Agra. Last year long hours were worked in Agra, up to 8 and 10 o'clock at night, with one gang. The hands did the work, but it was too much for them. He had two people at each gin, but even then the work was too much. He had no objection to a restriction of hours to twelve in Agra. They would have to make the best of it in Agra if such a law were made. Perhaps they might have to put up more gins, but in any event a way could be found to conform with the law. Ginning was overdone in Agra. There were also many gins in Cawnpore, but not too many for a really good season. Sometimes the ginning was carried on until the middle of April. Most of his hands were from Rajputana, and they often stayed for some years in the city. Wages were paid every day. He contracted for labour or obtained the labour himself, according to his judgment of the crop and season. He always kept the attendance roll, even when labour was supplied by contract. The hands were out for drinking, smoking, etc., as much as they liked. Witness thought that all bare electric wires in gins and cotton mills should have wooden casings, otherwise there was always the danger of an accident owing to a spark igniting loose cotton. Mr. Mell.

Witness No. 145.

Seth Behari Lal, managing director of the Shri Gangajee Cotton Mills Co., Ltd., Mirzapore.

I represent the Shri Gangajee Cotton Mills Company, Limited, Mirzapore; the factory employs labour as follows:— Seth Behari Lal. *Written evidence.*

Men	253
Women	61
Children	65
Total	379

My factory has been working from 1900, and the average number of working hours has been 13½ a day. I consider a week's time should be allowed pending execution of the certificates for half-timers. I have no experience of cases of half-timers going away to other factories as adults. I am not in favour of the creation of a class of "young persons." In the event of the law fixing the working hours for adults I would prefer that a maximum should be fixed, leaving to the discretion of each individual employer the settlement of the time for the commencement and termination of the day's work. As an example of the working hours of local industries in Mirzapore, the brass founders and workmen engaged in this industry work on an average 18 hours a day. In Mirzapore where my factory is situated skilled or expert labour is very scarce, and mill workers are decidedly inferior to those found in other big manufacturing towns, and therefore any restriction imposed on the working hours of adult operatives would cause great loss to us, and result in the ruin of the trade. Mills with a small number of spindles and having no weaving shed will suffer heavily as the average cost will be higher. It is not necessary to get an inspector from the United Kingdom. In my opinion the question of housing the factory hands should be left to the discretion of the agents of the factory. I am of opinion that legislation is not necessary, nor desirable, to limit the working hours of adult males, nor do I think that the physique of workers is affected by long hours, because they take long intervals during the working time by going out on different excuses. If, however, hours are to be limited I consider that at least 13 hours a day should be allowed. I do not consider that any fixed time for starting or stopping should be laid down, but that mill owners should be allowed to start and stop as it suits them best. Nor do I think that any specific time should be fixed for the midday stoppage. I am not interested in the "shift" system. I do not know of any illegal employment of children between the ages of 13 and 14, and I certainly do not think that there is any need to create a special class of worker between the half-timer and the adult in India. Holding the above opinion I do not see the necessity of maintaining a register of all workers under 16 years of age to facilitate enquiries. I employ a few women, but none at night, and I think that it would possibly be well to prohibit such employment, except in seasonal factories like ginning and pressing factories where employment of women is necessary because it is for a short period. I certainly do not think the minimum age of children should be raised beyond nine years. I should have no objection to the present age certificate also certifying the fitness of the child. If a child has already a half-time certificate, I should not be required to obtain a certificate before the child in question could work full time. I have no objection if the law prescribed that children shall not be employed, except in regular sets, leaving the allotment of time to the discretion of the agent of the factory. I most certainly do not think that factory owners should be obliged to provide elementary education, at their own expense, for children working in their factories, and would protest most strongly against any legislation to this effect. But arrangements for regular outdoor exercise should be made by mill owners as a physical exercise. It is not my experience that non-working children accompany workers to dangerous parts of factories. In my opinion no standard of purity for air in factories could be laid down which would embrace the whole of India. Conditions vary too greatly. I do not think that any standard of moisture could be prescribed. Where mills use a vapourising apparatus for humidifying purposes, I should think there would be no objection to a standard of purity for the water being laid down. I do not consider that any revision of the present laws regarding latrine accommodation is called for. But separate urinal accommodation should be insisted on. I approve of the exit doors opening outwards. I do not think that any further precaution for fencing machinery is needed. The absence of accidents justifies this reply. I think it desirable that arrangements should be made to secure uniformity in the administration of the Factory Act throughout India, with due regard to local circumstances. I should have no objection to the appointment of full-time medcial inspectors.

Seth Behari Lal.
Oral evidence.

Witness stated that his factory had 10,440 spindles and no looms. They worked in the hot weather from 5 A.M. to 7 P.M. and in the cold weather from 5-30 A.M. to 7-30 P.M. He could not give the hours of the half-timers, who worked in shifts. He considered that the hands could work these long hours because they loitered about a good deal. About two years ago he tried for a fortnight to reduce the hours to twelve, and keep the workmen from going out so much; but they complained of the strictness, with the result that he went back to the long hours. When he tried this experiment the production *per* spindle *per* day was half an ounce less. He should like to employ more young boys than he could get at present. There were other factories which engaged boys, and so child labour was scarce. He obtained some hands from Cawnpore. The Cawnpore men were more expert than the Mirzapore men, and would do in two hours what it would take the local hands four hours to do. The Agra hands also were more expert than those in Mirzapore, but were not so competent as the Cawnpore men. He had not a great many young persons over fourteen on the ring frames. He allowed an interval of forty minutes at midday. All necessary cleaning work had to be done on Sundays, and the men considered that to be part of their work. Witness sold his yarn locally. If the working day were restricted, his mill would be adversely affected. His children were always passed by the doctor before being employed in the mill. They remained on the premises the whole day, but did not work more than the time allowed by law. Practically he left it to the *mistris* to see that the children did not work beyond their half-day. The factory inspector came twice a year, the Civil Surgeon from four to five times a year, and the District Magistrate once or twice a year.

Witness No. 146.

The Elgin Mills Company, Cawnpore.

he Elgin Mill.
Written evidence

The working hours or adult males should not be limited. As regards the effect of "long hours"—we assume that by long hours are meant hours of work of above 12 hours daily—we are of opinion that they have not affected the physique of the workers. We have for some years past worked this mill for 12 hours a day, with the exception of a few short intervals when we have run for 13 or 14 hours in order to fulfil contracts; formerly we used to work regularly 14 and 15 hours daily, but it has not been our experience that such long hours are injurious. The reason is simple; mill owners work long hours when the standard of skill of their hands is low, to enable them to get sufficiently large outturns to run their mills at a profit. With a low standard of skill dilatory methods of work are inevitable, and it is our opinion that it is less injurious for a man to idle through even a 15-hour day, and produce say 12lb of cloth from a loom, than by constant application to his work to get a similar result in a shorter time. But while we allow that we ourselves find a 12-hour day the most satisfactory both in point of outturn and quality of work, we still do not think that any legislation is called for or desirable, having for its object the limitation of the hours an adult male may work. Such a step would be, so far as we know, absolutely without a precedent in any country. On the other hand we believe there is little doubt that if a precedent be once established, even by the introduction of moderate restriction in the first instance, further interferences with the liberties of the subject would speedily follow. Our contention is that no artificial hastening by legislation or otherwise of a result which must come of itself in due course is necessary or desirable. Any one conversant with the serious difficulties all Indian mills have in obtaining and keeping their labour will readily foresee the serious consequences likely to result from the placing of further difficulties in the way of mill owners. Being, as we are, of opinion that working hours should not be limited, we are not prepared to put forward any suggestions as to suitable restrictions. If, however, some limitation is eventually imposed, we do not think it necessary to specify the duration of the midday interval. This mill is always closed for one whole hour at midday, and if starting and stopping times are also laid down, we would have to lose half an hour from our day's work. It would in our opinion be exceedingly difficult to frame any law, common to the whole of India, which would be equitable throughout the country. In a country of such vast distances as India, climatic and other conditions vary greatly in different places. A law which might suit a mill situated in Delhi, might very possibly be totally unsuited to a mill in Madras, and we think that each local Government should have power to modify it, to suit the conditions prevailing in their own manufacturing districts, while retaining general principles common to the whole of India. The words "the illegal employment as adults of persons between the ages of 12 and 14," which occur in question (c) Adults, would seem to imply that it is thought that children between 12 and 14, who should work half time, having worked full time, the result has been physical deterioration. To prevent this it is proposed to create a third class, also working less hours than adults. Having regard to the much more rapid development of Indian children as compared with English, we do not consider that a boy of fourteen is too young to work full time. We do not approve the suggestion to create a "young person" class. It should not be forgotten that the Indian boy of fourteen is usually married, and by the age of sixteen not infrequently has to keep his wife himself, and in many cases children as well. Not only would it be a considerable hardship for such a boy not to be allowed to earn a man's wage, but it would undoubtedly lead to great discontent amongst mill hands. Indian mills have always laboured under great difficulties in obtaining their labour. This problem is gradually solving itself, in so far as the child workers as they grow up usually remain at mill work. In this way we shall no doubt in time have in India a regular class of mill workers as at home. Any measures which would be likely to curtail this source of supply of adult labour would be disastrous to the Indian mill industries. Except in the case of ginning factories, we consider that night employment for women might suitably be prohibited. We are not of opinion that the minimum age for children should be raised. Our experience goes to shew that native children of nine years of age are quite capable of working half time. In our opinion our child workers are all extremely healthy looking and well cared for. It seems to us therefore quite unnecessary to raise the minimum age above nine years, provided that it be possible in practice to so frame the law regarding half-timers that it cannot be infringed.

The Elgin Mills.

While we are far from advocating full-time employment for boys under fourteen, it certainly seems to us a question for consideration as to whether a boy is not better off who spends his whole day in the sanitary surroundings to be found in most well-managed mills than he would be if half his day were spent playing in a dirty bazaar, which is usually his home. We hardly think that certificates of physical fitness are necessary, but we would have no objection to the certifying doctor having power to forbid the employment of a child who was unfit for mill work. At the same time such powers might be made very harassing to mill owners, especially by a doctor without any acquaintance with Indian natives. We ourselves invariably obtain certificates of age before giving employment to new children. We see no necessity for making it compulsory for a boy to obtain a second certificate on attaining the age qualifying him for full-time employment. If he has already worked as a half-timer the date of his first certificate will at once disclose his age at any subsequent time. As for a certificate of physical fitness, it would in our opinion be very difficult to fix any standard. In any case we feel that we can fairly claim that we in our own interests would not employ a hand physically incapable of doing his work in an efficient manner. It appears to us that the best way to enforce the law for half-timers would be to prescribe that children should be employed in morning and afternoon sets, so that in a 12-hour day each boy would work three hours in each half of the day. This method would however be extremely troublesome to mill owners, but would make it more difficult for boys to work in two mills, which we feel sure they would try to do, if they were employed for the full half day at a stretch, and not allowed in at all for the other half. We most certainly do not think that mill owners should be made to undertake the education of their child workers. We would have no objection to providing space for a school upon our premises—indeed some years ago we did have a school, but it was discontinued from lack of patronage. With a school and teachers upon the premises it would be an easy task for employers to give their children a half day's work, and a half day's school, and they would in that way be certain that the children were not infringing the law. It is not within our experience that young children do accompany their fathers into the mills at all, except in the case of an occasional weaver bringing his son in to learn the trade. Children very often are brought in by their mothers, but so far as this mill is concerned, the women only work as winders, hand reelers, or waste pickers. In none of these cases is the place where the parents work either dangerous or unhealthy. We are not quite clear whether it is proposed that factory doors should be hung upon hinges. Such a proposal would meet with the strongest possible opposition from all mill owners, for two reasons. Firstly, in the case of doors between inter-communicating rooms, these are usually only provided to comply with the Fire Insurance Company's regulations, regarding the isolation of different classes of risks. To provide efficient protection such doors must be constructed to slide parallel to the walls,—in fact most of the Fire Offices give preference to a door which closes itself automatically in the event of the temperature rising above a certain point, which point is regulated by the point of fusion of a link of metal which normally holds the door in an open position. Any sliding door if properly constructed and provided with suitable handles on both sides can be readily opened from either side. The other and even more serious objection to hinged doors would be waste of space entailed by having to allow room in laying out machines, so that the doors might swing open. Of course no such objection would exist in the case of doors opening into a passsage or an outside door. We are not of opinion that further precautions for fencing machinery in cotton mills are necessary. The record of accidents from preventible causes in Indian factories is an extremely small one. We think that general principles governing the Factory Act might suitably be made applicable throughout India. We also think however that, having regard to the vast size of the country, each Local Government should have power to modify the Act to secure its equitable working in the manufacturing districts of their own Provinces. Considered as a class or community Indian mills at the present time have their full share of inpection, and we would be inclined to welcome any regulations tending to place the duties of such inspectors in the hands of properly qualified persons. We are of opinion that all inspections necessary to ensure the due observance of the Factory Act could and should be carried out by two officials, the one a medical officer and the other an inspector with expert knowledge of the trades carried on in the factories he inspects. Both should be qualified for their work by some years of Indian experience. Conditions prevailing in India and England differ in so many important respects that a man with experience of one country only would in our opinion be unqualified to act as an inspector in the other.

Mr. W. G. Bevis of the Elgin Mills, Cawnpore.

Mr. W. G. Bevis *Oral evidence.*

Witness stated that about ten years ago they worked a fifteen-hour day for five years. The result was bad work, great waste, and uneconomical working. The people who liked the long hours most were the European overseers, who received overtime wages. With their departure overtime had been stopped, and the working day had been gradually reduced from fifteen hours to twelve. Witness never had any complaints from the men about the long hours, and they also accepted the gradual reduction without demur. The twelve hours' day had now been in full swing for eight years, and he had prepared statistics showing the production now as compared with the long-hour days. It was difficult, however, to judge by statistics, as so many things had to be taken into consideration. Speaking generally, the outturn was much the same now as when working long hours, and the wages *per capita* were about the same. Without a rise in the rates of pay, the men earned as much now in the short day as when they worked long hours. It was his opinion that they had discovered the right number of hours for the economical working of an Indian mill. He was quite satisfied with the results obtained, and was now voluntarily working a twelve hours' day. For the last four years their average had been 11·9 hours. On principle he objected to any legislative restriction of the working day. A twelve hours' day would not affect them injuriously, but he objected to it on principle. The hands liked their one hour off in the middle of the day, and they took their chief meal then. They would also prefer an extra half hour in the hot weather at midday to getting home half an hour earlier at night. His experience was that there had not been any appreciable increase in skill among the operatives. The standard of skill had not

improved much, but there were more skilled men now in the mills. They had not improved as regards idling either. In proportion to the shorter day they still went out as much, and it was impossible to enforce strict discipline. The fact that the output was the same with a shorter day seemed to show that they had become more attentive to their work, but he had never tried to take a record of how much time a man actually wasted in a day. The abuse of the half-time system was due to the great scarcity of child labour. He knew of no attempt to enforce the law in this respect. The half-timers were in the mills the whole day. He considered that the three hours' shift system was the best for the half-timers, as if they worked their seven hours in one shift, and then left the mill, they would go to another mill. Within his memory the law in regard to half-timers had never been carried out in Cawnpore. Concerning the inspection of mills, he thought it absolutely impossible for one man to do that large district thoroughly. He thought that Mr. Walsh came once a year. The Magistrate and Civil Surgeon each came twice a year; but the local officers interpreted the law in different ways. The hands came for a short time on Sunday morning to clean machinery. This was considered part of their duties. If mill owners stopped two hours earlier on a Saturday to permit of this cleaning work being done then, and gave the hands a completely free Sunday, he believed that the operatives would appreciate the change. The hours fixed for a "young persons" class would determine the working hours of the mill, including the weaving department. He should have no objection to the "young persons" class if their working hours were fixed at twelve, and he would prefer this to a restriction of adult labour. At the same time there were difficulties in the way of making the "young persons" class really effective, and he did not see how it was going to be worked in practice. His objection to the restricted twelve-hour day was one of principle only. It was quite possible that once the principle was admitted, there would be a further restriction forced on India in time to come. The same argument, however, could be applied to the "young persons" class; there was the same danger of a further limitation of hours. He disapproved of the youth of fourteen having to obtain another certificate before being employed as a full-timer. He did not employ women except for hand-reeling, so in his case there would be no gain if women were allowed to work for twelve hours. The carpet hand looms were not under the Act. He approved of the certificate granted to the child of nine being for both age and physical fitness. No child should be allowed to work until he obtained this certificate. No grace should be allowed, as there was no difficulty in getting the certificate in Cawnpore. They gave the children a blank form, and the children themselves went to the inspection office, while the mill paid the fee. He objected to the physical fitness certificate having to be obtained by the young adult. There could be no hardship if the children were taken for a week's work on trial, but this might easily lead to abuse. From an article in the London *Times* of October 4, 1907, on the Indian cotton industry, witness had made the following estimate of the conditions of work in England and in the Elgin Mills, Cawnpore:—

	England.	*Elgin Mills*
Operatives *per* 1,000 spindles	4 2	25 6
Operatives *per* 100 looms	43	103
Annual outturn of yarn *per* operative	7,736lb	2,750lb

An English girl weaver—working 4 looms for 54 hours a week—would work 216 loom-hours a week, as compared with 108 loom-hours worked by an Indian operative, working—on an average—1½ looms for 72 hours a week. These figures were not calculated with reference to the cost of production, but solely with reference to the number of hours worked. The hours that the Indian operative worked did not cause the same strain on the body and mind as in the case of the English operative.

Hours of work and outturn.

Month and years	Average working hours of the month.	Average outturn *per* spindle for the month.	Average outturn *per* loom for the month.
January—	*Hrs. mts.*	*Lbs. oz. d.*	*Lbs. oz d*
1904	9 46	8 1 67	207 4 30
1905	11 30	8 6 5	175 8 38
1906	13 0	9 13 22	265 3 76
1907	11 53	10 4 76	263 8 77
February—			
1904	10 32	7 5 24	203 8 78
1905	12 30	8 3 7	182 3 27
1906	12 57	8 9 49	241 9 97
1907	12 0	8 15 16	215 5 29
March—			
1904	9 19	6 2 0	145 1 43
1905	12 30	8 12 39	221 0 8
1906	12 53	9 6 98	228 3 89
1907	11 57	9 15 51	213 11 89

Hours of work and outturn—contd.

Mr. B

Month and years,	Average working hours of the month.	Average outturn *per* spindle for the month.	Average outturn *per* loom for the month.
	Hrs. mts.	*Lbs. oz. d.*	*Lbs. oz. d.*
April—			
1904	9 45	5 15 67	124 14 7
1905	11 49	8 1 96	203 7 17
1906	11 44	7 12 69	166 10 89
1907	11 47	9 11 55	226 5 30
May—			
1904	11 2	7 5 05	168 13 41
1905	12 0	8 1 42	222 14 47
1906	11 55	8 11 13	186 9 06
1907	12 0	9 6 56	227 4 44
June—			
1904	11 30	7 15 59	195 15 11
1905	12 0	8 8 65	194 15 01
1906	12 0	9 4 61	219 13 10
1907	11 57	9 0 05	201 8 68
July—			
1904	11 18	7 11 51	200 11 77
1905	12 0	8 11 03	245 15 77
1906	11 53	8 13 97	242 10 85
1907	12 0	9 8 71	275 13 75
August—			
1904	11 43	7 6 48	189 12 78
1905	12 3	9 0 41	266 3 21
1906	11 55	9 9 70	265 2 44
1907	11 37	9 5 45	301 3 74
September—			
1904	12 23	7 9 36	194 8 15
1905	12 14	9 6 47	247 9 22
1906	12 0	8 11 75	222 6 14
1907	11 48	9 2 80	258 7 83
October—			
1904	12 54	8 0 69	178 1 01
1905	12 58	8 15 8	226 13 26
1906	11 57	9 12 78	242 14 77
1907	11 56	10 10 2	266 0 57
November—			
1904	12 12	7 12 5	184 10 43
1905	12 52	10 4 19	239 4 20
1906	12 7	9 5 55	259 9 27
1907	11 50	8 11 69	242 15 94
December—			
1904	11 30	8 3 17	200 2 38
1905	12 49	10 7 71	278 3 77
1906	12 25	10 8 03	280 3 40
1907	12 20	10 5 17	280 4 04

Evidence of operatives.

On Sunday, the 12th January 1908, the President and another member of the Commission visited two quarters of Cawnpore where mill hands reside, and recorded the following statements:—

Thirty weavers and twenty-five piecers, residing at Chotumia's buildings, stated as follows:—

We are employed in the Victoria Mill; we work from daylight to 7-30 P.M. or 8 P.M., with the usual half-hour interval at noon. We find the long hours trying, and are all desirous that Government should legislate to restrict work to 12 hours. We would work harder and earn the same as we do now. At present we actually do earn as much in the shorter hours of winter as in the longer hours of summer. As it is, we have no time at home in the evening, and some of the workers live at a distance of two miles from the mill The weavers leave work earlier as a rule. One man cannot work more than two looms, but that is because of the low counts and poor yarn. We ask Government to arrange for the earlier payment of wages in factories; sometimes we do not get ours till nearly the end of the following month; except to-day, we have always been called to the mill to clean our machines on Sundays.

About fifty spinners and weavers of the Muir Mills and Cawnpore Cotton Mills assembled at Butcher Khana, Cawnpore, stated as follows:—

We object to the long hours worked at present, and want a reduction to twelve hours a day. This might mean less earnings at first, but we should work harder and earn as much as at present. The Cawnpore Cotton Mill Co. reduced their working hours from 13 to 12 a year ago, and those of us employed there earn as much now as we did before. At present, especially in the hot weather, we have to go out of the mill frequently to get rest as the hours are so long, but if the hours were shorter we would loiter about less and earn as much as at present. We cannot ask our employer for shorter hours, as we cannot combine, and anyone putting himself forward would be dismissed. We would rather have only half an hour interval at noon, if a larger interval would entail working later at night; we want to get home as early as possible. One complaint we have is that when anything goes wrong with our looms, etc., and we ask for it to be repaired, there is always great delay in repairing it. We also ask for earlier payment of wages; at present we have to wait till nearly the end of the month following that in which the wages were earned. We are always called to clean our machines on Sunday from 8 till about 10 A.M.

WITNESS No. 147.

Mr. S. H. Fremantle, I.C.S., Registrar of Co-operative Credit Societies, United Provinces, nominated by the Government of the United Provinces.

Mr. Fremantle. *Written evidence*

The working hours of adult males should be limited. The present system by which men are kept for long hours in the factory compound is economically bad. The operatives take every opportunity of shirking work, because they are physically incapable of working steadily for these long hours, and the management expend a great portion of their energies in endeavouring to keep the employés at work, and supplying their places in case of non-attendance. As most of the work is piece-work, it would not be to the interest of the operatives to shirk work if their attendance was only required for a reasonable time. A reference is requested to paragraph 19 of my report on "The Supply of Labour in the United Provinces" printed at the Allahabad Government Press in 1906, and to my report of the following year on the hours of labour in mills and factories. The number of hours should for the present be limited to 12. Even this time is, it is submitted, too long for steady work, and eventually I look forward to a further reduction of hours. The radical changes in habits of work which would justify a short day cannot, however, be brought about all at once, and the advance towards a better system should be gradual. To enforce a 12-hour day I consider it would be sufficient to provide by law that the engine should only run for 12 hours. The time during which the engine runs is even now carefully recorded, and the register in which the entry is made should be open to the scrutiny of inspecting officers. I would not limit too strictly the times at which work should begin and end. The proposed limits of 5 A.M. and 8 P.M. are, I consider, reasonable. In the long days of the hot weather some mills, such as the Cawnpore Woollen Mills, allow 2 hours' interval in the middle of the day, and this is very popular with the workers. If the hours for commencing and finishing work were too restricted, this arrangement would not be possible. On the other hand, where many of the hands live a long distance from their work, they might prefer a later beginning in the morning and a shorter interval at midday. If thought desirable, the present law of a minimum half-hour interval might be continued. In factories working on the shift system there is no general complaint of excessive hours. The hands work generally only 10 hours without electric light, and 12 hours when the light is used. The present arrangements, however, press very hardly on the supervising staff, who are responsible for the efficient working of the factory during the whole time that the engine is running, and there is a considerable body of opinion that better results would in the long run be obtained by working with one 10-hour shift only, without the use of electric light. A law to this effect would, however, meet with much opposition from those interested in the jute industry, and there appears to be nothing in the condition of the operatives to render necessary any legislation to this effect. There is no necessity for the institution of a special class of "young persons" which would introduce unnecessary complications into the working of the Act. With proper arrangements it is not impossible to prevent the illegal employment of persons under 14 as adults. A special register of workers under the age of 16 seems hardly to meet the case, as it would always be easy for a mill manager to say that a boy was not considered to be under 16, and hence was not entered in the register. Great difficulty would be experienced in keeping such registers correct and up to date, and in a large mill it would be by no means easy to trace the boys from it. The following system is suggested as an alternative:—To require age certificates (of above 14 for a full-timer and above 9 for a half-timer) for all workers up to and including 17 years of age, the attendance registers to give a reference to these certificates. No separate register would be required. The inspector would go into any department of the mill with the attendance register in his hand, and call for any certificate he wished to see. Nine is a suitable age for beginning work, provided that a proper half-time system is in force. A healthy boy of this age can work 6 hours in the factory without detriment to his health. Certificates of age and physical fitness should be required for children, and before a boy is allowed to work full-time a certificate, both of age and physical fitness, should be required. Regular sets for the employment of children should be prescribed, either morning or afternoon, or double sets. Unless this is done, it is probable that the law will be evaded. Education should be provided for half-time children by factory owners, who should be assisted by the Municipality or District Board under the grant-in-aid rules, the schools being subject to the inspection of the officers of the Educational Department. Unless some arrangement of this sort is made, experience shows that efficient schools will not be provided. Attendance in these schools should be compulsory for half-time workers. I would make no rule prohibiting non-working children from accompanying workers to any part of the factory. They are probably better looked after there than if left at home with no one in charge. I think that if factory inspectors are given some training in sanitation, there is no necessity to appoint full-time medical inspectors.

Oral evidence

Witness stated that two years ago he was placed on special duty by the Government of the United Provinces, in connection with a special enquiry originated by a resolution of the associated Chambers of Commerce with regard to the scarcity of labour. He had to enquire into the causes of this scarcity in mills, factories, and mines. He visited a great many mills and factories in Bengal, the United Provinces, and the Central Provinces, and came to the conclusion that the long hours worked were a great factor in deterring labourers from undertaking factory work. He considered that the reason why the jute mills in Calcutta had plenty of hands was because they worked shorter hours, as compared with the cotton mills in Upper India. He found it extremely difficult to ascertain the real opinions of the operatives. They did not mind working by electric light in the cold weather, up to a reasonable time, but they did object to the long hours such as those worked in Cawnpore in September. Witness did not go into the question of the health of the operatives, as affected by the long hours. He approved of a twelve hours' day, and thought that most operatives would be content with slightly smaller earnings. In Nagpur they worked an average twelve hours' day. It would, no doubt, be better to equalise the working day throughout the year, but if this were done,

Fremantle. it would necessitate the introduction of electric light for use during the cold weather months. He understood that the labour-supply had improved now. The hands in the local mills and factories were men from the United Provinces. The United Provinces also sent men to other Provinces, and specially to Calcutta, towards which the communications were better than towards Bombay. The hands from the United Provinces preferred employment in Bengal to employment in Cawnpore or Agra, as in Calcutta they made better wages in shorter hours. Personally, he did not think that the "young persons" class was necessary, and it would be very difficult to work. If they fixed the "young persons" hours at twelve, this would fix the working hours of the mill, and so a restriction of hours generally might be obtained; but for his part he saw no practical object or advantage in limiting the hours of "young persons," while not limiting those of adults, except the preservation of a principle which some people appeared to think a great deal of. Unless some sort of protection was given, the adults would learn to combine. There was some combination even now, but he had not heard of any combined movement having for its object a restriction of working hours. He had heard of a combination, and subsequent strike, owing to something done to one of their number. The workers understood a strike; but as yet they had no organisation, and he doubted whether they realised their own power. He should say that there was no organisation, mill by mill, over a large area. It might sometimes happen that one or two men had the power to call out the whole staff, and they occasionally demanded an increase in the rates of pay. This, however, was only in individual mills, and there was no organisation to consider questions affecting their general interests, such as the restriction of hours. In this matter of long hours they did not understand their own interests, and could not protect themselves. Restricting the "young persons" class to a certain number of hours would be an indirect way of restricting adult labour, and of the two ways he preferred the direct way. The hands in any district would not leave for other districts, unless they were fairly certain of obtaining employment, and if they went to other large centres outside the Province, it was because they generally had relations there. Witness would not say that the workers as a body objected to the long hours worked in Cawnpore and Agra, but he was convinced that the long hours prevented many adults from becoming permanent workers in the mills. They often left because of the late hours up to which the mills worked. Hands who had kept to the work for six months and upwards were not deterred by reason of the long hours, but in the course of the first six months many new recruits left mill work. He was in favour of houses being provided for mill hands, and considered that the provision of houses found a special attraction to workers in the jute mills. At first they objected to the sanitary and other regulations, but on becoming accustomed to the houses they much preferred them to the bazar hovels. The provision of houses might not pay the mill-owners, considered as a separate financial speculation; but the advantage to the workers, and indirectly to the mill-owners, was very great, and it was important that the provision of houses should be stimulated. He did not make special enquiries in regard to the observance of the Sunday holiday, or whether the operatives had improved in skill. That was a question for an expert. Another reason for the popularity of the jute mills was the more frequent payment of wages there, as compared with the practice in other industrial centres. The labour-supply must be affected when men knew that they had to wait nearly seven weeks for any money at all. Witness was in favour of having schools, situated outside or inside the mill premises, and he would compel all children to attend them. He was of opinion that the parents would be glad to know that their children were in school, and would like them to learn to read and write, once they realised that the boys would not be allowed to work more than so many hours a day. He did not propose that the schools should be run at the expense of the factory owners, but they should have the benefit of the grants-in-aid regulations of the Local Governments and Municipalities. He would make this primary education part of the mill discipline. This would only be following the example of England, where compulsory attendance at school for half-timers was introduced some 40 years before it was applied to the country as a whole. The schools would have to be under the Education Department. The children would be prevented from working elsewhere, which was the object desired when compulsory education was introduced in the English factories. Education was becoming popular, and he believed that, even if the attendance were optional, a good many children would go. Witness was very doubtful whether the establishment of labour bureaus would have any beneficial effect. He did not see how the law could be evaded if half-timers worked in regular morning and afternoon sets. Their certificate of working would belong to the mill, and they could not obtain employment in another mill without this certificate. Impersonation, and the obtaining of two certificates, would be possible, but very improbable. He had never heard of a case of a half-timer working in two mills in Cawnpore.

Witness No. 148.

Mr. A. L. Saunders, I.C.S., Commissioner of the Lucknow Division, United Provinces.

Mr. Saunders. *Written evidence.* Of the two kinds of inspection, *ex-officio* by Magistrates, and special by qualified inspectors, the former is defective in being without technical knowledge. It is also apt to be perfunctory as being a *parergon*. Special inspection on the other hand is lacking in authority, and is too infrequent to be effective. A Magistrate's orders are attended to because he is Magistrate, and because he may call again next week to see if his orders have been carried out. But a special inspector's remarks are merely regarded as advice with which compliance is optional. In any case he will not be round again for another year. It is enough to write "Will be attended to" on his memorandum. I have had reason to think that sometimes fencing of machinery ordered by the special inspector is put up for his visit and then removed, often by the men for whose safety it is intended, who find it gets in their way. It is impossible for Government to provide a qualified inspector at each station. As between inspection which is effective, but uninstructed, and the other kind, I think the former is to be preferred It is no use having elaborate rules of the latest European model which are not enforced. I therefore think the main inspecting agency should be that of local officials. Technical

knowledge should be supplied by an inspector-general, or similar officer with the necessary qualifications, who should instruct local officers what and how to inspect, and should rely on them to carry out his directions. Most factories, in this part of India at any rate, are in large head-quarter towns. It is the policy of Government to employ special qualified health officers in such towns, apart from and subordinate to the Civil Surgeon. I would suggest such officers being local factory inspectors. The District Magistrate may be relieved of factory inspection. He should deal with failure to carry out orders, but they should not be his own orders. The suggestion that factory inspection should be centralised, and placed under the Department of Commerce and Industry, is good, provided it works through local officials as proposed. I would not limit the working hours of adult males. I would not create a "young persons" class. From boy to man in India is a very rapid step. The employment of women at night should be prohibited. In fact, as far as possible they should be separated from men, while at work. I think 10 or even 12 might be the minimum age for children to be employed. I would require certificates of both age and physical fitness, for both half-time and full-time work. I am not sure about sets. The more casual work suits children better. Education for children in a factory is an unnecessary and irritating requirement. I strongly recommend the entire exclusion of non-working young children from factories. The best-managed factories do exclude them. They are in danger, they are a nuisance, and I suspect they are often allowed to work illegally. Mr. Saunders.

Witness expressed the opinion that the present system of inspection was not adequate, there being no co-operation between the two classes of inspectors. The man with practical knowledge—the technical inspector—had no power to enforce his orders, and the other man—the District Magistrate—could enforce orders, but was without technical knowledge. In his opinion, District Magistrates had not the time to devote special attention to inspecting; further, there was no continuity in their interpretation of the law. There should be inspectors, or inspectors-general for large jurisdictions; *e.g.*, there should be one for the United Provinces, and another for Bengal, while the local officials should be responsible for seeing that the inspector's orders were carried out. He suggested that these duties could be executed by the health officers, who were members of a newly created department. At present the inspector's report went to the District Magistrate, who was supposed to see that it was acted upon. In reality, the Magistrate sent copies of the report to the factory owner and manager, who promised that the recommendations should receive attention, and there the matter frequently ended. An inspection book in each factory, to which reference could be made, would be a good innovation. In his opinion, the inspection by the District Magistrate, as Magistrate, should stop, as it was not effective. The dual control practically meant no control at all. Concerning the fencing of machinery and other defects, he doubted whether they could follow the English system under which the inspector notified his requirements on a prescribed form, to which was attached another form which had to be filled in and returned to the inspector by a given date, stating that his requirements had been complied with. Witness thought it would be difficult to obtain satisfactory replies in India, without local verification, as compliance was often a matter of opinion. One might find a manager who was quite capable of placing the back of a chair against a wheel, and terming that "fencing of machinery." They would require constant inspection to get the sanitary arrangements effective. In reply to the President, who pointed out that the law in regard to half-timers was not enforced to some extent in Lucknow, witness observed that the responsibility for this was somewhat vague. As a question of law, he thought that the District Magistrate would be primarily responsible. Before commencing work in a new factory, the proprietor always sent due notice of the fact. Witness did not consider a restriction of working hours for adults at all necessary. So far as adult labour was concerned, he would leave the factories a free hand. He did not think that the operatives needed protection. There was complete freedom of contract and the operative was free to choose the hours he preferred. He did not think that the prospect of increased wages would lead a man to overwork himself. It was the rule in India that when a man had got more than sufficient for his bare subsistence, he left off work until the surplus was expended. He was of opinion that child labour required very careful regulating, but the proposed "young persons" class was not desirable. *Oral evidence.*

WITNESS No. 149.

Mr. C. A. Walsh, A.M.I.C.E., special inspector of factories, Bengal and the United Provinces.

I think it would be preferable to fix the hours that adults should work. I consider it also advisable in factories, not working in shifts, to fix the hours as below, *viz.*,— Mr. Walsh. *Written evidence.*

(1) from 5-30 A.M. to 6 P.M. in the hot weather months, and 6 A.M. to 6-30 P.M., or even 7 A.M. to 7-30 P.M., in the cold weather, and that

(2) there should be an interval between noon and 2 P.M. of at least half an hour. I am disposed to recommend an hour, as I consider that no man or woman in this or any other country should do more than 11 hours' work a day;

(3) as regards the shift system I approve of 5 A.M. to 8 P.M., but I think the shifts should be made the same in all mills, in order to facilitate the checking of working hours.

I do not think there is any physical deterioration of children or adults in jute mills, as the conditions are very different from those obtaining in cotton mills, but the evidence of the medical inspector might be accepted on this question. I do not think it advisable to create a class of "young persons" in this country at present, but I approve of maintaining a register of all

Mr. Walsh.

under 16 years of age. I have always advocated prohibiting women working at night in factories, but night work might be allowed in ginning mills by notifying such factories, in the local gazette, as a large number of very poor women come down from as far as Bikanir to work at the ginning mills situated in the Upper Provinces, and having no suitable accommodation for them, in many towns, it is more comfortable for them to be in the shelter of these mills at night than camping out in the cold weather; also the majority of ginning mills only work for a season, lasting from 2 to 4 months. I do not think the age of children should be raised beyond 9 at present. It is questionable whether a child's physical fitness would be improved by keeping it out of a mill; much would depend on the textile industry in which the child worked, and whether the mill was working on the shift system or otherwise. For instance, I do not think a child's health would be improved by getting up at 4-30 A.M. every day to attend mill work at 5 A.M., but a mill commencing at 6 or 6-30 might not be detrimental. The certifying of half-timers, for age and fitness, before allowing them to work full time, might be undertaken in cotton mills where the number of young persons or children employed is comparatively small, but it would necessitate considerable labour to certify young persons as eligible to work as adults in jute mills, in consequence of the enormous number working in this industry when compared with cotton mills of similar size. It should be left to the owners, in my opinion, to provide elementary education or not. Many mills of recent years have gone to great expense in providing excellent dwellings for the operatives, and it may safely be left to them to introduce schools, in the near future, without enforcing such by law. As regards infants accompanying their parents in mills, I cannot do better than quote a passage from my last annual report on this subject:—

"The subject of allowing infants inside mills has, on more than one occasion, been referred to me for my opinion, and I have invariably assented to this custom. Much as I regret these little ones meeting with an occasional accident, I feel convinced there is no more danger inside the mill when watched by their parents than left unattended in their own homes. The idea that small children are perfectly safe out of a mill when left to their own devices is entirely erroneous, as the following appalling statistics prove. Mr. Walter Schroder, the St. Pancras Coroner, states: 'There were 1,751 deaths of children from burns in England and Wales in 1904, caused by the parents leaving the children unattended'. I venture to think that had these children been allowed inside jute or cotton mills there would have been few, if any, accidents resulting. It is the publicity given to an accident occurring in an Indian mill that induces many ignorant but well-meaning persons to suggest legislation to prevent infants accompanying their parents in mills, forgetting that, should their recommendations become law, they either deprive the mother of employment, or compel these little ones being left alone with the chance of meeting with a similar fate to those alluded to by the St. Pancras Coroner. I should, however, be glad if the managers would discourage, as far as possible, infants remaining in the carding department, rather a favourite resort, not only because the quantity of gearing is attractive, and their hands can pass through the guards, but principally because the dust given off by the breaker cards is excessive, and breathing such an atmosphere must be detrimental to their health." Samples of air might be taken in cotton mills, but this I do not consider necessary in jute mills, as the doors, windows, and ventilators are invariably open throughout the year, and to reduce the heat during the hot weather months, many mills have lately fitted fans or *punkhas*, which naturally add to the comfort of the workers. A standard of moisture may be practicable and advantageous in the Upper Provinces, but in Bengal I have frequently seen the dry and wet bulb thermometers during the rainy season between 7 and 9 A.M. at the same level, thus indicating 100 *per cent.* of moisture in the air; after that hour the dry bulb rises, and the wet sinks. I am not aware of any contrivance that will reduce the moisture that is naturally in the air, although there are many to produce moisture. The opinion of the medical staff might be accepted on the necessity or otherwise of creating a standard of moisture for cotton mills where practicable. One seat for every 25 persons might be introduced for mills working in the single shift, that is to say, when all come at 6 or 6-30 A.M.; but it would be excessive to enforce this number in the case of jute mills, all of which are working in shifts. It would mean that several mills would have to provide some 320 seats, as there are over 8,000 hands working at Gouripore, Kankinara, Titaghur, Khardah and Shamnagore, etc. But one seat for every 40 might be insisted on for mills working the double-shift system. Doors to open outward might be prescribed in all mills constructed with one or two storeys, but this is, I consider, unnecessary in jute mills consisting of the ground floor only, as such mills are provided with hundreds of windows open all round from which exit could be made at any time, if necessary. I consider the number of accidents that occur annually from machinery will compare favourably with those in the United Kingdom. (See my annual report of 1906.) In this report I have referred to the absence of shuttle-guards in jute and cotton mills, which may be compulsory in Lancashire and Dundee; but in that report as stated there are over 26,000 looms in the jute mills alone, and in 15 years I have not had or heard of a single accident due to flying shuttles; consequently, I do not think it necessary to advocate such guards even though they may be compulsory in home mills. However, further precautions for fencing certain machines are necessary, and additional guards are, from time to time, introduced where found necessary. (See remark in annual report on the calendar.) I think one set of rules should be printed for posting in mills throughout India, and these rules should be an abstract of the Act, somewhat on the lines of those I drew up some years ago in Bengal, and not a mass of rules that do not in the least apply to the operatives, leaving out, as they do, all the most important sections of the Factory Act, such as the age children may be employed, the hours they may work, the interval of rest required, etc., etc. I do not think it necessary at present to appoint a full-time medical inspector in the United Provinces, as the number of factories there at present does not warrant such an appointment, especially where the majority are ginning mills and presses, but one might be appointed for Bengal to assist the present staff.

Oral evidence.

Witness stated that he took over the duties of factory inspector sixteen years ago. He had charge of the whole of Bengal, Eastern Bengal and Assam and the United Provinces. At first he could make two rounds a year, but now he could only inspect the factories and mills once a year. Since he first began inspecting, the work had been more than doubled, while there had been no

increase in the inspecting staff. Witness visited many of the ginning factories and presses, but could not possibly get to those in out-of-the-way places. He had to let many of these go uninspected. Government had made suggestions to increase the staff, but there had not so far been any practical result. Witness had 133 factories in the United Provinces, and about 200 in Bengal and 99 in Eastern Bengal and Assam. He had to do the whole of the inspecting work himself, and it was impossible to visit all the factories, owing to the distances they were apart. He inspected in regard to the provisions of the Act generally. He was not aware there was any proof of the infringement of the law in regard to the employment of half-timers in the United Provinces, but was prepared to admit an absence of any real check on the working hours of half-timers in that Province. The law was not infringed in Bengal, where the double-shift system was in force. Under the system according to which the half-timers were employed in Cawnpore, the owners and managers made out that the children only worked seven hours a day, as they had frequent, but irregular and unsystematised, absences from work. The children were on the mill premises the whole working day, but if one discussed the matter with the managers, they replied that the children had been out playing for several hours. He had never taken a test case to court, as he would have had great difficulty in proving that the child in question had worked for more than seven hours. It was difficult to say who was responsible for this apparent infringement, if any, of the law relating to half-timers in the United Provinces. He had repeatedly referred to the long hours in his annual reports, which went to Government and were perused by Government officers. In 1895 he called attention to the matter, and since then he had mentioned it in his annual reports. The District Magistrate, as the man on the spot, was in a better position to stop the practice by instituting prosecutions if he considered the Act evaded. Witness did not think that the half-timers were systematically worked the whole time that the mill was working. He was of opinion that the managers tried to keep within the law but the checking was left too much to the *sirdars*, and it was unsatisfactory. Witness did not know that the half-timers received full-timers' wages, but he was aware that the half-timers could not be paid without some responsible persons passing the pay sheets. The half-time system in the United Provinces had never given him satisfaction. The mill managers all said that the half-timers got their legal period of rest. The half-timers also received passes which allowed them to go out of the mill. Witness was not prepared to say that he was responsible for this system of working. He admitted that by not prosecuting mills he might have given mill managers an excuse for saying :—"The factory inspector is not over-particular, and we can go on in our own way." There was no proper system of shifts for half-timers in the United Provinces. In his opinion the Magistrates could issue a summons or prosecute if they considered the law was evaded. His reports went to Government, and if the Magistrate chose to issue a summons after perusing his report, he (the Magistrate) could do so. There had never been a prosecution in Cawnpore, on his suggestion, in respect of this system of employment of half-timers. In some cases where the children had been working after eight o'clock he had taken proceedings, and had been successful in securing convictions. Witness had frequently visited mills on Sundays, but had never found all the hands working. He had found a small percentage of hands present, who were engaged in cleaning-up, and thought that the Sunday work done would be considered legitimate. Repairs were allowed under the Act, and cleaning-up was generally admissible also. In this respect he thought that the mills in the United Provinces were managed similarly to those in Calcutta, and it was his opinion that cleaning a loom on Sunday was allowable under the Act, as it would never exceed an hour, if that. He regarded a school on the mill premises as a depôt from which to recruit labour. He approved of schools outside the mill but the expense of running them should not be borne by the mills. When a mill was run in two shifts, he considered eleven hours' work for each shift sufficient for adults. He knew of one mill in Bengal which worked short hours, where the weavers left to go to another mill working long hours. The first mill was thereby forced to install the electric light, and go in for longer hours. In his opinion the health of the operatives had not deteriorated by reason of the long hours. The Agra men had never complained to him of the long hours. He thought that all mills working single shifts should run during fixed hours, say from six to six, so that there would be a better check on them, while those mills which wanted to give long midday intervals could do so by giving proper notice. In fixing the hour for commencement of work he thought six o'clock quite early enough, as all women and children had to come at the opening of the mill. He would not object to a working day fixed at any twelve hours between half-past five in the morning and half-past six at night, according to local time. Too early a start was objectionable from the point of view of the women and children, who in Calcutta had often to get up at 4 A.M. He considered twelve hours a pretty long day for the "young persons," and would not suggest their working more than 9½ to 10 hours. When one placed their hours at twelve, then the utmost limit was reached. Personally he did not think they could have a "young persons" class in India now, as it would complicate matters too much. In the jute industry it would be a gigantic task to register the "young persons" who went about from mill to mill, working a few days here and a few days there. If mills were allowed to fix their own hours, and one stopped at 6 P.M., another at 6-30, and another at 7 P.M., he thought there would be a gradual drifting to a common closing hour at the latest period. When there were large numbers of mills concentrated in a small area, the hours should be definitely fixed. He was of opinion that the working hours for single shifts should be fixed for all classes of labour. The double-shift system in Calcutta was perfectly clear and definite. Witness advocated an abstract of the Act being conspicuously placed on the walls of all factories. The factory rules posted do not state the hours children may be employed, or the period between which they may work, neither is any reference made to closing on Sunday, etc. This should be prescribed by law. Latrine accommodation of one in 25 would be enough for the United Provinces, working with single shifts. One seat for every 40 working in double shifts as in the jute mills in Bengal would be sufficient. Witness recommended the appointment of one inspector for the United Provinces. He required the assistance of an additional inspector at once for Calcutta and Bengal, including Eastern Bengal and Assam, and a whole-time medical officer should also be appointed for Bengal. As witness was to be called again in Calcutta, the Commission postponed his further examination till then.

Mr. Walsh.

Witness No. 150.

Mr. J. Imms, manager of the Upper India Couper Paper Mills, Lucknow.

Mr. J. Imms. *Written evidence.*

We work here by shifts, and so the question of the restriction of the hours of adult labour does not affect us. We have no women on our establishment at present, and our boys work in the open air. The numbers on date are as follows:—

Men	..	..	..	..	..	..	..	569
Women	..	..	..	..	..	..	..	*Nil.*
Boys	..	..	..	..	..	..	..	79
						Total	..	648

Factory owners cannot fairly be compelled both to provide elementary education at their own expense for children working in their factories, and to bear the deprivation of their services during such time, especially when these half-timers can leave them at any time at their parents' pleasure. To constitute a separate class of "young persons," as in the United Kingdom, does not appear to be feasible, any more than the proposal to require certificates of age, or the maintenance of a special register of workers under the age of sixteen, as it is very difficult to determine age with any degree of exactitude. Our mills are constructed with full regard for proper ventilation and lighting. The experiment of the housing of factory hands has not proved a success, as in our case they have been chiefly drawn from the neighbouring villages. The present arrangement of medical examination by the Civil Surgeon, who is also the Health Officer of the place, meets all requirements. There will not probably be work enough here for full-time medical inspectors of factories at present.

Oral evidence.

Witness stated that the mill gave employment to 564 men and 84 boys. No women were employed. They worked the 24 hours with two shifts, from 6 to 6, and each shift had one hour interval at 12 o'clock. The mill closed down from 6 P.M. on Saturday to 6 A.M. on Monday, but the day-shift hands had to come on Sundays from 6 to 11 A.M. for cleaning and repairing machinery, etc. They received a full day's pay for this. The shifts worked alternately day and night, and the pay was the same. No man worked in both shifts. A number of store coolies were engaged, and if they knew that a night shift man could not come, then a coolie went home to rest for the remainder of the day, and put in an appearance at 6 P.M. for night work. Witness would not say that a day shift man had never stayed on throughout the night. If this had happened, it had been at the man's own option, and was a very rare occurrence. There were 400 inside workers, with the same number in each department night and day. The half-timers were employed from 7 to 11 A.M., and from 2 to 5 P.M. The *jemadar* looked after the children, who all left work at 11 A.M. They remained in the compound, playing about or resting, but did not work. Owners and managers had for some time now been compelled by the Civil Surgeon to observe the law concerning half-timers. The half-timers earned from R3 to R4 a month, and were employed outside the mill in rag-sorting, grass sorting and waste paper sorting. There were no half-timers inside the mill, and they were never employed at night. Inside the mill, he had about 20 young persons who would come within the age limit of 14 to 16. A fixed 12 hours' day would not affect his firm at all, or have any injurious effect, and they had no objection to such a restriction. Persons of all castes were employed in the mill. The ordinary coolie earned R5-8-0 to R7 a month, and a man inside the mill, on the machinery, earned up to R14. In addition to the interval the hands idled about at least one hour in the course of the day. The majority of them took their meal at the interval. All the half-timers were examined by the doctor, who received a fee of 4 annas a child, whether the inspection was done at his office or at the mill. They did not have a shaker, and all the rag-sorting was done in the open air, away from the building. With the exception of some cases of small-pox, contracted at their homes, there had been no other infectious diseases amongst the rag-sorters. He considered that the hands were fairly permanent employès. While they would not be affected by a fixed 12 hours' day, yet he objected to the proposed "young persons" class both on account of the age difficulty and the question of physical fitness. It was difficult to determine age, and equally—or more—difficult to determine whether a boy was physically fit on attaining a particular age.

Witness No. 151.

Mr. P. J. Lucas, of Messrs. E. Dyer & Co., Lucknow.

Mr. P. J. Lucas *Written evidence.*

I am the manager of Messrs. E. Dyer & Co.'s brewery, Lucknow. The number of men employed is 190. No women and children are employed. Our working hours are from 6 A.M. to 5-30 P.M. during the winter months, and from 6 A.M. to 6 P.M. during the summer months. An interval of one hour between 12 noon and 1 P.M. is allowed. When day and night work is necessary it is all done by shifts. I certainly think there should be a limit to the working hours of adult males. A working day of twelve hours is, as a rule, long enough, but it should by all means be left to the discretion of each individual employer to settle the time for the commencement and termination of the day's work. We have never seen any signs of deterioration in the physique of our men, many of whom have worked with us for a great number of years. We do not employ any young persons

between the ages of twelve and fourteen, but I do not see any reason why such should not be employed, as adults, if they are physically capable, and if the work allotted to them is of a comparatively light nature. A special register of workers under sixteen might be kept to facilitate enquiries as to their physical fitness. The question as to whether women should be employed at night must depend on individual cases; when the husband is a night worker there is no reason why the wife should not also be employed. On the other hand, as a safeguard against immorality, it would perhaps be advisable if women were not employed for night work. In my opinion nine years might well be left as the minimum age at which children are allowed to work in factories. Certificates of age and physical fitness should, I think, be made compulsory in the case of children under twelve, but I should leave it to the discretion of the manager or factory owner as to whether half-timers should be allowed to work as adults or not. Even if the principle that half-timers should not be allowed to work as adults, unless certified, is accepted, I do not see how it could be applied in practice, as it would be almost impossible to prevent a half-timer who had been refused a certificate as an adult at one factory from obtaining employment as an adult in another. I do not think that factory owners should be obliged to provide elementary education at their own expense for children working in their factories. It is a matter which I should leave entirely to their own discretion. I am entirely in favour of a rule being made to prohibit non-working young children from accompanying workers to dangerous and unhealthy parts of factories. Such a prohibition could be enforced by holding the foremen of such departments responsible for any breach of the rule. Practically the whole of our work is carried on in the open, or in covered sheds, so the questions regarding ventilation and humidity do not apply in our case. One seat for every twenty-five workers should be quite sufficient latrine accommodation. It would be advisable to have separate urinal accommodation. Doors of working rooms should certainly be hung to open outwards in case of fire. All our machinery is securely fenced in, and in our own case no further precautions are necessary. The administration of the Factory Act should, I think, be made uniform throughout India, as far as possible. The appointment of full time medical inspectors would, I am of opinion, be advisable.

Mr. Lucas.

Oral evidence.

Witness stated that most of their work was in the open air, and he considered it a healthy occupation. They would not be affected by a restricted twelve hours' day. In the brewing season from September or October to March, they worked continuously night and day, with two shifts, which changed at 6 A.M. and 6 P.M. Breweries were exempted under the Act from giving the Sunday holiday; a half holiday is given on Sundays, and a whole one on that day as often as possible. After the brewing season Sunday was always regarded as a holiday. A workman never did duty in both shifts and should a night shift man fail to appear, then the remainder of the shift had to manage as well as they could. The same wages were paid for day and night work and the men kept to their shift throughout the season. The engine room was also worked on a proper shift system. The coopers were mainly Punjabis, and the remainder of the staff local men. He had not employed half-timers since the present Act was passed and had no young persons at all. He always allowed one hour for the midday interval, and occasionally two or even three hours in the hot weather, if they could afford the time. The hands took their meals in this interval. A few of the coopers resided on the premises, and the other men lived fairly close to the brewery. He objected to a restricted twelve hours day, because they did not want to be tied down, so that in a special emergency they would be unable to work beyond twelve hours. The factory inspector came to the brewery about twice a year, and the Lucknow authorities also visited it twice a year. Witness had been connected with the industry for 20 years. His firm did not employ females, and was against their working at night. Witness would leave the question of physical fitness of a young adult to the discretion of the factory manager. He saw difficulties in the way of the proposed "young persons" class. A great deal of future trouble would be saved, if the youth of 14 obtained an age certificate before being employed as an adult, and he had no objection to the young persons being compelled to obtain this certificate.

Witness No. 152.

Munshi Prag Narain Bhargava, Lucknow.

Munshi Prag Narai Bhargava.
Written evidence.

It is very seldom that adult males work more than 12 hours, and I do not consider this period long enough to affect their physique. Ordinarily 13 hours of work, with an interval of one hour in the middle, is sufficient time for work, and the work should commence at 6 or 7 A.M. just as the weather permits. The engine should be stopped for an hour, between noon and 2 P.M. The working legal hours should not be limited to 15 (from 5 A.M. to 8 P.M.) for it would be unprofitable to employ a second set for the extra three hours, and this would mean a heavy loss to the proprietors of factories. I believe there has been no illegal employment of adults, and hence no physical deterioration that I know of. The creation of a class of "young persons" does not seem to me necessary. No women are employed by me. The minimum age for children should be made 10, for a child of nine is not strong enough to work well. The existing system of age certificates is quite sufficient, and in the business I am connected with there is no work requiring special care or strength, and hence a certificate of physical fitness appears to me unnecessary. It is no use prescribing the employment of children in regular sets. Experiments made by me to give the children elementary education have proved a failure. The children or their parents are too poor to give them education, and they want to take work out of them as soon as they find them strong enough to do something. To give them education in extra time would be a great strain upon them, and moreover it is for the Municipalities to provide elementary education, not for the owners of factories, who on account of the keen competition prevailing are not in a position to spend money on this account. I have never seen any one taking his children to dangerous places; but if it is done, managers of the firms should be made responsible for this, and the practice if it exists should be put an end to. In my works no experiment as to the purity of air has been made, but water as supplied by the mains is fit for drinking purposes, and no legislation seems to me desirable in this line. I do not consider it worth while to have full-

Munshi Prag Naram Bhargava.

time medical inspectors, the present system secures the due observance of the Act as far as I know. I represent the Lucknow Iron Works and Newal Kishore Press, and I employ more than 700 men and boys in the two works. The above factories have very seldom worked more than 12½ hours, the usual working hours being 12 only. If certificates of physical fitness are required, fifteen days' time should be given to test the work of the boy before he is sent for medical examination. The managers should keep a register of such boys. I have said that medical certificates are unnecessary, and I think it would be impracticable to apply that system. There would be great difficulty in distinguishing boys who are refused certificates. The medical examiner will be very much overburdened with this kind of work. I consider the creation of a class of "young persons" quite unnecessary, inasmuch as the present system is quite satisfactory. The nature of the business I am connected with is such that at times the demand for work rises very high, and it becomes impossible to cope with it unless a few hours' overtime is done. I have always found workers in my employment very glad to avail themselves of the opportunity of doing extra work and thereby increasing their income. If unnecessary and uncalled for restrictions are introduced, their effect will be very badly felt by the workers and the employers. I think it quite unnecessary to obtain inspectors from the United Kingdom. If the laws are made more stringent they will interfere seriously with the employers of labour. The housing of factory hands in India under the present circumstances seems impracticable, on account of social customs, etc.

Oral evidence.

Witness stated that he employed 450 men in the press, and about 350 in the iron works. Half-timers were only employed in the printing press, and they worked from 9 A.M. to 4 P.M., with half an hour interval. They performed small jobs in connection with the hand press work, which only commenced working at 9 A.M. Half-timers were never employed on the machine presses. When there was a pressure of work they had to work overtime up to 9-30 P.M. On one occasion this overtime lasted for 25 consecutive days, leaving out Sundays. Ordinarily he would put overtime work at ten *per cent.* of the working time. The rates of pay for overtime were slightly higher than the day rates. A restricted twelve hours' day would affect the printing press injuriously, as it was often essential to work overtime to execute urgent orders. In the iron works they did a ten-hour day in the cold weather, and a twelve-hour day in the hot weather, so that a restricted twelve-hour day would not affect him for ordinary working. Occasionally, however, he had to work overtime, and then the restriction would have an injurious effect. For three weeks in November they worked up to 10 P.M. by the aid of Washington lights, in order to execute an urgent order in connection with the famine relief works. In the case of overtime the hands had fifteen minutes' rest at six o'clock. All the iron works' hands were above 16 years of age. He could not get sufficient labour for two shifts for overtime work. There was a scarcity of skilled labour, and the ordinary coolie labour was becoming dearer. He could not meet urgent orders by getting more hands. The half-timers in the press earned from R3 to R4 a month. They were in the pay of the pressman, but the foreman in charge of the hand-press room was responsible for the carrying out of the law. The man at the gate would not allow half-timers to enter before 9 A.M.

Witness No. 153.

Lieut.-Col. J. Anderson, M.B., I.M.S., Civil Surgeon, Lucknow.

Lt.-Col Anderson. *Written evidence.*

I have inspected the factories at Agra and Lucknow during the past nine years. I am not in a position to supply statistics showing the relative healthiness of these operatives as compared with the general average of the non-factory population of the same class. I have formed a definite opinion on this subject, as the result of experience, although I am unable to support that opinion by statistics. In my opinion the factory population is above the general average of the same class as regards physique. This is to be expected, considering that they are well paid and properly fed. They also live under good sanitary conditions. The operatives I am acquainted with do not, so far as I am aware, suffer more than the general population of the same class from any specific classes of disease. I should like to note an interesting fact in this connection. During the plague epidemic here last cold weather not a single rag-picker at the paper mills contracted the disease, although they must have been handling all day long old clothes, etc., saturated with plague bacilli. In my opinion the ages of children can be best determined by examination of the teeth. The general development and the size of the hands and feet should also be considered. These form a guide sufficient for all practical purposes. The dentition test is, I believe fairly reliable. In my opinion the permanent teeth appear in Indian children about the under-noted ages :—

(*a*) Central incisors	7 years.
(*b*) Lateral incisors	9 ,,
(*c*) Canines	12 ,,
(*d*) Anterior bicuspids	10 ,,
(*e*) Posterior bicuspid	11 ,,
(*f*) Anterior molar	6½ ,,
(*g*) Second molars	13 ,,
(*h*) Posterior molars	17—25 ,,

I have on several occasions found that children under 14 were being worked beyond the prescribed limit. The managers of the Lucknow Paper Mills, Lucknow Iron Works, and Ram Chand Gursahai Mall Cotton Mills have all admitted doing so. A whole-time medical inspector may be necessary for the Bombay Presidency and another for Calcutta and the mills in the vicinity. In other parts of India the factories can quite well be inspected by Civil Surgeons, as at present. It would be cheaper to recruit and retain whole-time men for the factory work. Pay of R500 *per mensem* rising to R1,200, would probably attract men of the stamp required. They should not be per-

mitted to take private practice. The standard of latrine accommodation suggested by the Textile Factory Labour Committee fulfils every requirement. Lt.-Col. Anderson.

Oral evidence.

Witness stated that he had been in Lucknow for six years, and had also been in Agra. He thought that the Lucknow and Agra operatives were about the same as regards physique. There had been no deterioration of health of the Lucknow factory workers. The law in regard to half-timers was very strictly enforced there. He had visited the factories at odd hours, and considered that the provisions of the law as regards half-timers were observed. Witness thought that a 12 hours' day would interfere very much in some cases, and he would not limit adult working hours, on the ground that the men were capable of looking after their own interests. He did not approve of such long hours as were worked at Agra. He considered that from 5-15 A.M. to 9 P.M. was too much for any man. He placed 12 hours as the reasonable daily working time for an Indian operative, and he considered 12 hours a fair day's work. There was no phthisis, or special diseases, among the factory hands in Lucknow. He approved of prohibiting children, suffering from eye complaints, from entering the factories. The doctor should be called upon to examine both in regard to age and physical fitness. He estimated that about five *per cent.* of children would be rejected on account of their physical condition. He inspected the factories every three months. Last year, when plague was bad, there was not a single rag-picker at the paper mills who had plague, although they must have constantly handled plague-infected rags. He attributed this to their working in the open air. Some of the rag-pickers had contracted small-pox, but that disease was epidemic in Lucknow. There was no competition for child labour in Lucknow, and he had never had a boy brought for examination who was under 9 years. In Agra he often had doubtful cases of age to determine. The children were employed for a few days before examination. Witness had reported some cases of employing children overtime, but there had never been a prosecution. He thought it would be advisable if he were informed what was done as the result of his recommendations during inspections. There had been no deterioration in the health of the adult workers, and in that respect no legislative restrictions were necessary. He approved of the formation of the proposed "young persons" class, and would limit their hours to 12.

Mr. H. M. Cardew, Locomotive Superintendent, Oudh and Rohilkhand Railway Workshops, Lucknow.

Mr. Cardew.
Written and Oral evidence.

Witness stated that the number of men employed at the Locomotive Workshops, Oudh and Rohilkhand Railway, Lucknow, on December 1st, 1907, was 2,913; no women or children were employed. The working hours were 8½ a day, and 5 hours on Saturday. No work was done on Sundays, except repairs to machinery and washing out the boilers. Overtime was worked in one or more shops as required, after working hours, when daylight permitted, and on Saturday afternoons. He had had 29 years' experience. No person below 15 years of age was employed, and they might have about 50 hands near that age, as well as about 40 European and Eurasian apprentices ranging in age from 15 to 17 years. They commenced work at 6 o'clock in summer and 7 o'clock in the cold weather, and there was an interval of 1½ hour at midday, during which time the men took their meals. Once or twice a year it was necessary to work overtime for two or three weeks at a time, but even then it only made their working day one of 10 or 11 hours. The large majority of the hands put in the maximum attendance every month, and if they absented themselves without leave they were fined half a day's pay. He considered them a healthy class of men. There was a dispensary outside the workshops, and the workers took full advantage of it. The workers could do 12 hours' work a day continuously, but the railway had never tried to work them to that extent. He considered a 13 hours' day too long. The men had improved in skill, and he had a larger number of good men than was the case some years ago. The workmen, however, moved about from one railway workshop to another. In his opinion a mechanic class of workpeople was growing up. The railway had never made any provision for housing their hands. A restricted 12 hours' day would not affect them at all, as they only worked overtime from 4 to 6 P.M. and there was no night work. They paid the daily rate of wages for overtime work. The men were paid by the day, and there was no contract or piece-work. There was a scarcity of labour, and he believed the reason was that the people affected by the famine were not the people who cared to conform to fixed hours in a workshop. Also it was probable that more employers now wanted workers of the same class. There was a waggon building branch of the workshop about two miles away. He disapproved of the proposed "young persons" class, and had never employed children in order to avoid all complications. He had no objection to a restriction of work to 12 hours, provided that provision was made for overtime work for break-down purposes, and other cases of emergency. In addition to the 1½ hours' interval, he estimated that the men took half an hour off during the day. On the whole, while they were at work they worked steadily. He considered that an English operative would do the work of two Indian operatives, so far as railway workshops were concerned

NOTE.—The witness' written and oral evidence has been amalgamated in this statement.

WITNESS No. 154.

Mr. R. K Biernacki, Officiating Carriage and Waggon Superintendent, Lucknow.

Mr. Biernacki
Written evidence

I am Carriage and Waggon Superintendent of the Oudh and Rohilkhand Railway, and have also charge of the Lucknow Carriage and Waggon Shops. About 1,500 hands are employed. No women are employed, and no children under 14 years. The works have only been in existence 2 years. We have never worked the staff over 11 hours a day. Our ordinary working hours are 8½ hours a day on week days, and 5 hours on Saturdays. On Sundays the shops are closed down, except for specially

Mr. Biernacki.

urgent work. I cannot give exact figures showing the effect of long hours on outturn, but my experience is that work falls off both in quantity and quality when more than nine or ten hours' work a day is done. It seems to me undesirable to fix any "legal working hours." A limit of 11 hours work out of the 24 should meet all requirements. In railway working special circumstances occasionally arise which make the observance of ordinary regulations impossible. In such cases a responsible officer has to legislate for himself for the time being. I should say that the importation of mature factory inspectors from the United Kingdom would be a mistake. But it is very necessary that factory inspectors should get their practical (workshop) experience at home. What would probably prove the most successful plan would be to get out well-educated young men who have just completed their work-shop training in the United Kingdom, and then let them learn their inspecting duties (as assistants) in this country. This is the method followed in recruiting locomotive officers for State Railways. I think that any laws made should allow for modifications to suit special conditions, subject to the approval of the local Government inspectors and the sanction of Government. I have no suggestions to make regarding the housing of employés. Circumstances so alter cases that legislation in this respect would in my opinion do more harm than good. The *regular* working hours for adult males should certainly be limited. But provision should be made for working extra long hours occasionally when emergencies demand it. On railways this is absolutely necessary. I have had no experience of adult males suffering in physique from working long hours. But most natives are incapable of sustained attention for long periods, and this lack of the power of prolonged concentration is liable to be a source of danger to themselves and others when extra long hours are worked. My experience is that 11 hours work a day (*viz.*, 12 hours with one hour's interval) should be the limit for ordinary regular work. The best working hours would be from half an hour after sunrise to half an hour before sunset, subject to a limit of 11 actual working hours, as above. The engine should, in my opinion, be stopped for an hour's interval at midday. Men must start digestion before resuming work, besides eating their food. On the shift system the times for changing shifts are not very material, provided the men do not work more than 11 hours out of the 24. I have no experience of the illegal employment of juveniles. We employ no labourer below the age of 14, and reject youths about whose age there may be doubts. It certainly is desirable that a register of juvenile employés under 16 should be kept Also a medical certificate as to age should be required in each case. Parents and others are very apt to overstate the age of children when seeking employment for them, and laymen who are interested in procuring cheap labour are not always reliable judges as to age. One latrine seat for every 30 employés is a reasonable provision. Uniformity of administration is certainly desirable, but modifications to suit local conditions, *under sanction*, should be provided for. The medical inspection of factories is, in my opinion, unnecessary. If factory inspectors know their business there is no need for medical inspection as well. Factory inspectors should have a sufficient knowledge of sanitation to meet practical requirements.

Oral evidence.

" Witness stated that he had had 23 years' experience of Indian operatives. He thought that in some ways there had been a decided improvement in individual skill, but the all round average was perhaps lower than it used to be. The intelligence of the best operatives had become sharper, but owing to the demand for labour being greater than the supply, and the consequent employment of insufficiently skilled hands, the average skill had gone down. In particular cases one could now get better work done than some years ago, but many out-siders had been drawn into the artisan ranks, and these had not the hereditary aptitude that seems necessary to make skilled workmen in India. He had not observed any improvement in the habits of industry of the workmen, and estimated that on an average each man wasted at least 10 *per cent.* of his time while at work, by dawdling. Also some men would go out 4 or 5 times a day to the latrines, and take 15 minutes off each time, if allowed. The working day was fixed at 8½ hours because this was found from experience to give the best results, both in respect to the native operatives and the Europeans supervising them. Natives working in their own way would no doubt work a longer day; but for good work 8½ hours was found the best limit. His experience was that native workmen could not stand the same amount of continuous work as Europeans. The climate had a decided effect on Europeans who had been in the country for some years. The operatives always slacked off in the afternoons during the hot weather. The interval was one hour at midday, during which time all operatives took their meal and rested. It was not his experience that they ate their food earlier by preference. Young adults could easily stand 8½ hours work, but they were the first to give in in times of stress. They could not do the same amount of continuous work as the older men. He engaged nobody under 14 years of age. On an average every operative took from 2 to 3 days off a month. Attendance was best when work was easy. In times of pressure the absentees were greatest among the younger men, who had no dependents. At one workshop where there was no local competition for labour, they gave a man two chances if he absented himself without leave or medical certificate. The first time he was fined R1, the second time R2, and third time he was dismissed. This system worked well, but it would not do where there were other competitors for labour. He considered that the workers as a class were a healthy body of men. Only necessary repairs and specially urgent work were done on Sundays. The cleaning up was done every day, during the last quarter, the whistle being sounded 15 minutes before closing time for this purpose. The factory inspector visited the shops once or twice a year. On one occasion at Lahore witness was warned in regard to Sunday work, but when it was explained that no productive work was being done, the matter was dropped. The hands had no objection to overtime, as a rule. But if continued for long, they generally knocked off work after a time, to spend the extra money earned. They received up to 50 *per cent.* extra for special night work, but for ordinary overtime they got ordinary rates. Closer supervision was required during overtime, as the men were slacker. The conditions of inspecting in India and England were different. Men were wanted in India who would take an unbiassed view of things—in fact they should be gentlemen. They should be men brought up at home, educated at home, and trained at home. Indian experience alone would not do. But if a well-educated young man, who had been brought up at home, came out to India after serving three years in shops at home and then put in two years in shops in India, he might be all the better

for it, as his opportunities for learning would be unlimited, and he would be given more important work than at home. If a "young persons" class were formed he considered it desirable that a young persons register should be kept. This would be a check against employing children as full-timers whose ages were doubtful. The question of age should certainly be left to the doctor, but a man's physical fitness for any work was a matter for the individual himself. Employers would not engage nor keep men who were not up to their work physically. An operative in a factory such as a mill, doing repetition work, worked under less strain than a workman in shops. In some factories run by natives the men did need protection. Generally speaking, a man could take care of himself, but when he had a family he had no option but to work the long hours demanded by his employers. Witness knew of one factory where the whistle went before time and again in the evening after time in order to knock an extra half hour out of the men. Such abuses showed the need for some protection. The protection he would give the men by legislation was that which they could not obtain by themselves. No doubt with sufficient European supervision the workers could be kept always at their task, but the amount of European supervision required would be so expensive as to be prohibitive. In the Oudh and Rohilkhand Railway Carriage and Waggon shops the ideal aimed at was to get a certain daily task from the men, this being about 25 *per cent.* less than what they could do if they were worked continuously under pressure. He considered that the railway got a very fair return. Should the Commissioners recommend a restriction of adult working hours, then he asked that a special overtime provision should be made for railway work during emergencies. There should, in his opinion, be a general exemption for all urgent work on railways. Mr. Biernacki.

Witness No. 155.

Mr. George Sutherland, manager of the Ram Chand Gursahai Mal Cotton Mills Co., Lucknow.

I am of opinon that the working hours of adults (males) should not exceed 12. Regarding their physique being affected by long hours, this has not been apparent as far as my experience goes. The starting of the mill in the morning will depend upon daylight, consequently the stopping will vary in accordance therewith. The hour of starting should be left to the discretion of the managers. The present half-hour stoppage between 12 and 12-30 seems to suit the operatives, and in my opinion there would be no harm in prescribing that the engines should be stopped for half an hour between noon and 2 P.M. The present system of passing boys at the age of nine, and allowing them to work half-time up to the age of fourteen, seems to cause no physical deterioration, therefore it would be unnecessary to create a special class of intermediate workers. The present system of examination and inspection by the Civil Surgeon is ample for all requirements. It is highly objectionable to work women at night. Children seem to be quite fit at the age of nine to start work, and there does not appear to be any necessity of raising the minimum age beyond nine. A certificate of age only seems to be necessary for the employment of children. The Civil Surgeon should pass the boys before they are allowed to work as full-timers. The present Indian Factory Act seems to provide adequately for the employment of children in sets. The question of providing elementary education should be left to the discretion of the mill-owners. Non-working children should not be allowed near any dangerous or unhealthy part of the factory, and the heads of the different departments should be held responsible for this. As far as my experience goes I do not find that the air in Indian factories is bad. A standard of moisture, similar to what mills in Lancashire making the same kind of stuff have, should be provided for. A standard of purity of water must be fixed for humidifying purposes. I am of opinion that the latrine accommodation should be raised to one for every twenty-five operatives employed. All windows and doors should be so made that they can be readily opened from the inside, outwards, in case of a fire. Arrangements should be made to secure uniformity in the administration of the Factory Act throughout India. Mr. Sutherland *Written evidence*

Note.—The witness did not attend for oral examination.

CALCUTTA.

WITNESS No. 156.

The Hon'ble Mr. H. C. Streatfeild, the representative of the Government of Bengal.

Hon'ble Mr. Streatfeild

Written evidence.

It is necessary in the first place to emphasize as strongly as possible the undesirability of undue interference with factory labour in this country. The essential difference between factories in India and in the United Kingdom is generally recognized in theory, but in practice it appears often to be forgotten. Yet the fact that the labour in the vast majority of factories in Bengal is non-resident, and can and does leave a factory the conditions of which are not favourable, and either return to homes in the country or go to another factory, is one which at once renders unnecessary such control as is called for in the United Kingdom, where the operatives often have the alternative of working in the nearest factory or of starving. The habits of Indian operatives as regards the taking of holidays and of intervals in their work, and occasional returns to their homes: the great demand for and inadequate supply of labour, which renders easy terms and liberal wages a matter of course: and the extreme sensitiveness of the labour force to any interference with their settled customs, render it unnecessary and undesirable to insist on strict legal control of the working of factories. The Government of Bengal desires therefore emphatically to assert its opinion that any legislation which is proposed should be of a tentative and permissive character, except as regards matters where practice, and not mere theory, has shown legislative interference to be called for. There is only one special inspector of factories on R800—50—950, for Bengal, the United Provinces of Agra and Oudh, and for Eastern Bengal and Assam. He is also Vice-President and Secretary of the Boiler Commission. He works directly under the Government of each Province as regards the factories situated in its jurisdiction. The following medical officers are also inspectors under the Act:—

(*a*) The Police Surgeon, Calcutta, for so much of the town of Calcutta as lies to the south of Canning Street, and for Sealdah.

(*b*) The Superintendent of the Mayo Hospital, Calcutta, for so much of the town of Calcutta as lies to the north of Canning Street.

(*c*) The Civil Surgeon of Hooghly, for *thana* Naihati in the district of the 24-Parganas.

(*d*) The Station Staff Surgeon of Dum Dum, for that sub-division.

(*e*) The Medical Officer in charge of the Northern Suburban Hospital of Barnagore, in the district of the 24-Parganas.

(*f*) The Civil Surgeon of the 24-Parganas, for the rest of the district.

(*g*) The Magistrates of their respective districts are also inspectors under the Act.

The pay and establishment of the special inspector of factories, together with that of the medica inspecting staff for the year 1907-1908, was budgetted at R27,791. The inspection reports are scrutinized by the Magistrates of the districts, and the Commissioners of the Divisions, and orders are issued by them to carry out the inspectors' recommendations. Mr. C. A. Walsh, the present special inspector of factories, was recruited from the Public Works Department, Government of India, he having served an apprenticeship in large engineering works in England, and subsequently worked in charge of railway workshops in this country at Lucknow, Saidpore, and Kanchrapara. He is also an Associate Member of the Institute of Civil Engineers. His work has been satisfactory, but owing to the great increase in factories both in Bengal and in the United Provinces there is no question that he is now overburdened with work, and requires assistance. If additional inspectors are hereafter employed, they might, if the chief inspector is properly qualified, probably be safely recruited locally, though preference in making appointments would naturally be given to men having some training for the work. Local knowledge and knowledge of the vernacular would be a more valuable asset than a special training in England. Proposals for additional staff are now under consideration. It is probable that a separate inspector will shortly be appointed for the United Provinces, and in that case one chief inspector with an inspector under him could probably do the work efficiently, if separate medical inspectors are appointed for sanitary and health purposes. It is not advisable to centralize factory administration throughout India, at any rate without much more discussion than the question has at present received. Although uniformity in factory administration is for many reasons desirable, yet the facts that conditions of labour vary in fundamental respects in the various provinces, and that the Local Governments are, through the Chambers of Commerce, in far closer touch with the agents and managers of factories than the Government of India can be, render it undesirable to do away with the control of the Local Governments. The fact that all rules framed under the Act by Local Governments require the previous sanction of the Government of India should serve to secure whatever uniformity is necessary. The question of the appointment of medical inspectors of factories is one on which the Local Government has not yet been able to form a final opinion. It is the fact that Civil Surgeons have not the necessary time to perform duties under the Factories Act with efficiency: while the fact that some of them work for the mills in their professional capacity renders their employment as inspectors open to objection.

Hon'ble Mr. Streatfeild.

For the purposes of sanitary control alone, such as the inspection and regulation of septic tank installations, circumstances point to the necessity of the appointment of a special officer under the Sanitary Commissioner. For efficient working it is probably desirable that every factory should be visited at least once a quarter, and this would necessitate for Bengal alone (it has at present about 280 factories and the number is increasing) two whole-time officers. It is most important that these officers should be highly qualified, absolutely reliable, and of such social standing as to reduce to a minimum the chances of friction with factory managers. The best plan will probably be to appoint officers of the Indian Medical Service corresponding to and drawing the same pay and allowances as Deputy Sanitary Commissioners working directly under the Sanitary Commissioner: they should not take private practice—the duty of certifying the ages of children should be in their hands, as well as the inspection of factories as regards sanitation, and the employment of women and children. In order to avoid delays in obtaining certificates, children might in the first instance be certified by the factory surgeon, and their names entered in a register, which should be checked by the inspector at his next visit. There are grave difficulties in the way of limiting the working hours of adult males, and as far as this Government is at present informed there has been no deterioration of physique among workers in consequence of long hours, and no necessity for limiting the hours of adult males has been established. Night work should be prohibited except under the special license of Government for special reasons: and the working time of factories limited to the hours between 6 A.M. and 6-30 P.M., or, 5-30 A.M. and 6 P.M., or, where the day-shift system prevails, between 5 A.M. and 8 P.M. There is probably in the majority of factories no necessity for a compulsory stopping of the engine for half an hour between noon and 2 P.M., since it is understood that workers usually take such intervals as suit them. If any stoppage is enforced it should be for at least an hour, since half an hour is insufficient for cooking and eating. The rules should be enforced by prosecution where the engines are without valid excuse found working in prohibited hours. No physical deterioration as the result of employing as adults persons under 14 has been detected in Bengal, and the creation of a special class of young persons is undesirable and impracticable. It seems desirable in order to prevent evasion of the rules as to the minimum age for whole-time labour that a register of all persons under 16 employed in each factory should be kept up.

Night work should be prevented as far as possible for both sexes and all ages, and should be absolutely prohibited for women. Nine appears to be a proper age at which children may be allowed to work in factories. Their earnings after that age are of value to their parents; and, if not working, they would be neglected and loose on the streets. Both their age and physical fitness should be certified before they are allowed to work. Certificates of age are unnecessary before children who have worked half time are allowed to work full time, since their age can at once be determined from their former certificates. Once a worker is classed as an adult he should judge for himself whether he is physically fit for work or not, and no certificate of fitness should be required. It is necessary that children should be employed in regular sets. The set in which a child is to work should be entered by the manager on its certificate, and its presence in the mill apart from the set so entered should be punishable. It is at present impracticable to compel by law factory owners to provide elementary education at their own expense. Many factories are small and ephemeral—and the enforcement of any such provision would be extremely difficult. The formation of factory schools should, however, be insisted on as far as possible by inspecting officers. It is impracticable at present to prevent young children from accompanying workers to dangerous or unhealthy parts of factories. It would be extremely difficult to define such parts, or to punish breaches of such a rule if made, and it is probable that workers would greatly resent any interference with the custom by which mothers take their infants with them wherever they go. In view of the varying conditions of factories in India it is at present impracticable to prescribe an analytical standard of purity for air in factories. The same remark applies to the standard of moisture. The extreme humidity of the climate at certain seasons would render the enforcement of a standard impossible in any case. As to the standard of purity for the water used for humidifying purposes, it is understood that the use of anything but pure water ruins the apparatus used for these purposes. Moreover, the fixing of such standards as are suggested above would imply an elaboration of the system of inspection over factories, and an amount of interference with their working, which present conditions do not warrant. The standard of latrine accommodation should probably be fixed at 1 seat for every 40 workers and separate urinal accommodation should be provided. The standard of 1 seat for 25 workers is unduly high, especially where the work is done in shifts, and would mean very heavy expenditure on the part of the factories. All doors of working rooms should open readily from the inside outwards, in case of fire. No definite further precautions seem necessary as regards fencing machinery. Inspectors should, however, have power to insist on fencing where they consider it necessary, subject to an appeal to Government.

Oral evidence.

Witness stated that his evidence might be taken as representing the views of the Government of Bengal. Personally, he had no knowledge of factories. The Government of Bengal thought that there should be no restriction of the day working hours. The hours of work during the night should be restricted. He did not think that the Government were aware of the fact that the rule in regard to the age of half-timers was not enforced at all in Calcutta. He did not know that about half the children employed were below nine years of age, or that many half-timers were working full time. These irregularities pointed to insufficient inspection, and the Bengal Government freely admitted that the inspection arrangements were insufficient. Witness would prefer that the Act should be worked by means of rules drawn up by Local Governments to meet the needs of particular districts, but questions of principle, such as the ages of protected workers, should be definitely settled by the Act itself. Government were now proposing to appoint an assistant inspector for Bengal, and Eastern Bengal and Assam, on the assumption that the United Provinces would have a separate inspector. He did not think that one man could inspect the whole of the Bengal factories. The final requirements would probably be one inspector for Eastern Bengal and Assam, two for Bengal, and

one for the United Provinces. He attributed the non-enforcement of the law as regards half-timers in Calcutta to the inadequacy of the inspecting staff, and also to the fact that the Civil Surgeons were not specialists in factory work. If children were employed without certificates it was because the examination was not compulsory. It was part of the Civil Surgeon's duty to inspect the children in the mill. The Bengal Government approved of the proposal that no child should be allowed to work until a certificate had been obtained. He would make the certifying surgeon's decision as to age absolutely final. Any member of the Indian Medical Service, or surgeon in charge of a district, would be qualified to do medical inspecting work. The factory surgeon could certify children pending the visit of the medical inspector. Witness was of opinion that a youth of 16 was capable of taking care of himself as much as a grown-up man of 25. He did not see the necessity for the proposed "young persons" class, and the keeping of a register would be almost impracticable in Calcutta. If the certifying inspector had special facilities for getting about he could do all the inspection work in and around Calcutta. If a single officer of the Indian Medical Service were employed as medical inspector, it would be necessary to confine his duties to the examination for age; the special inspector could attend to the ordinary duties connected with the inspection of ventilation, machinery, etc., and could probably do the necessary sanitary inspections also—such as latrines, and so on. If a reasonable standard for the purity of air were fixed, and if it would not involve any interference in the working of the factory, then he had no particular objection to it. He approved of the certifying surgeon stating the child's approximate age on the certificate. He had heard it stated that at the conclusion of one set's shift the children were offered *bakhshish* to stop on for another hour or so. Witness did not consider that the compulsory registration of births was practicable. He had no personal experience of the working of the Act, but if certain important provisions of the law had been generally disregarded, he would hold the special inspector of factories responsible. He was not aware whether the special inspector had had a hint from Government, or any responsible authority, that he was not to prosecute in cases where children were employed contrary to the provisions of the law. To the best of his knowledge, no such instructions had been given. The special inspector had frequently asked for assistance. While it was known that in some cases the Act could be evaded, Government were not aware of the open evasion of the provisions relating to the employment of children. In regard to the prohibition against women working at night, he would allow them to work in certain specified instances—in ginning for instance. He approved of all the reports from inspectors being received and reviewed by one central authority; otherwise there would be a loss of power. The Government of Bengal would not object to the appointment of a responsible officer, who would have all such reports sent to him, and who would sanction all prosecutions.

Hon'ble Mr. Streafeild.

WITNESS No. 157.

Mr. H. T. S. Forrest, I.C.S., Magistrate of Howrah.

I see no necessity for limiting the working hours of adult males. I have not noticed any signs of deterioration of physique due to long hours. I am not aware that persons between the ages of 12 and 14 are employed as adults, and I do not think that the creation of a class of "young persons" is required. Women should not be employed after 8 P.M. I think the minimum age for children should be raised to 10. The Civil Surgeon should certify that the child is of the minimum age, and also that he is physically fit, before he is employed. The same procedure should be adopted when it is proposed to convert a half-timer into an adult. In both cases thumb-impressions should be taken. Children should be employed only in regular sets. In localities where the mill population is resident, the provision of elementary education by the factory owners might be desirable: in Howrah, however, the mill hands are so constantly on the move that very little practical benefit would result. The language question is also a difficulty in Howrah. Non-working young children should not be allowed to accompany workers to unhealthy and dangerous parts of factories. An enclosure should be provided inside the compound and the children should be looked after by an elderly woman. I do not think that it is generally necessary to prescribe a standard of purity for air in factories. Something might, however, be done in factories where chemicals are manufactured, or "offensive" industries, such as bone-boiling or soap-boiling, are carried on. I do not think that it is generally necessary to prescribe a standard of moisture either. Shafts with wide mouths communicating direct with the air might be fixed over the boiling cauldrons used in "dangerous and offensive" trades I am doubtful of the utility of fixing a standard of purity for water used for humidifying purposes. For latrine accommodation 1 seat for 35 would be sufficient. Separate urinals should be insisted upon (they might be nearer the work sheds than the latrines). Separate latrine accommodation for children should be insisted upon in the interests of morality. Doors in work rooms should open from the inside outwards; also balconies with ladders or staircases at frequent intervals should be insisted on in all factories with one or more storeys. I think the present arrangements for fencing machinery are sufficient, provided young children are prevented from going into the parts of the mill where machinery is at work. I do not see the advantage of making procedure uniform throughout India. Each Province might adopt the system of administration best suited to the habits of the people. I do not see any necessity for the appointment of "medical" inspectors, but I think full-time Factory Act inspectors might be appointed to work under the orders of the Civil Surgeons. One such inspector would be sufficient for the District of Howrah. A trustworthy European on R150 to R200 a month would be the sort of man required. The high rate of mortality and disease among the coolies in Howrah is, in my opinion, due chiefly to the way in which they crowd and pig together in insanitary huts, in order to save rent charges. The number of people stowed away in a small mud hovel is often astonishing. I would suggest that mill and factory owners should be compelled to provide coolie lines for a certain proportion of their average

Mr. Forrest. *Written evidence.*

Mr. Forrest.—

labour force (say 75 *per cent.* within Municipal limits and 50 *per cent.* elsewhere), and that these lines should be regarded as part of the mill premises for the purposes of the Factory Act.

Oral evidence.

Witness stated that he had had three years' experience of factories in Howrah. He had no regular times for inspecting, and could not say that he inspected each factory once a year. Witness had seen many young and under-sized children in the mills, and when he first came to Howrah he spoke about it to the then Civil Surgeon (Colonel Gibbons), who said that there was no general evasion of the law, and so nothing further was done. He had not attempted to make further investigations with a view to putting into force the provisions of the law relating to children, beyond talking to the Civil Surgeon on the subject. There had never been a prosecution of an owner or manager for employing a child under nine years. Witness had never ordered these under-sized children to be certified. They were not bound to have the children certified, and he had never satisfied himself that all the children were in fact of the proper age. The weaving department operatives worked from 5 A.M. to 8 P.M., but had a system of shifts among themselves. He did not see why they should interfere with these people. They were not made to work, and if they worked they did so of their own accord. He considered that the average Behari mill hand was of rather better physique than the average agricultural labourer one saw in the Behar districts. They come to Calcutta to make money, and saved half their pay. The mill children hardly looked so well; but he attributed this, not to overwork, but to the insanitary conditions under which they lived. Witness was of opinion they needed an officer under the Civil Surgeon who could pay surprise visits to the mills. He would only give this man power to report to the Civil Surgeon. The Indian Medical Service officer could do the certifying work. The Civil Surgeon had plenty of time for private practice, and witness did not see why he should not do inspection work. Witness had not received any instructions from his superior officers on the subject of the inspection of factories in Howrah. Concerning the employment of under-aged children, the Civil Surgeon told him that there was no general evasion of the law, and the Civil Surgeon saw the factories a good deal oftener than the Magistrate did. In the matter of pay and hours the men had combined to enforce their demands. The Fort Gloster mill hands struck on account of the hours, and the local hands of the Belvedere Jute mills had struck as a protest against the employment of up-country labour. The hands had, however, no combination covering any large area. He did not attribute the high mortality among Howrah operatives to physical deterioration, but rather to the way they lived. There was very bad overcrowding, and mill workers always suffered heavily when dysentery and cholera were about. In his opinion no child should work without first obtaining a certificate of fitness, and he approved of the minimum age being raised to ten years.

Witness No 158.

Lieutenant-Colonel J. F. Drury, I.M.S., Civil Surgeon, Howrah.

-Col Drury
ritten evidence.

The working hours of adult males should be limited. I have no evidence that the physique of workers has been affected by long hours. I should say twelve hours would be sufficient for the people to work, with a rest of one hour in the middle of the day. I have not met cases of the employment as adults of children below fourteen, though I have frequently seen children over fourteen employed as children. Women should not be employed at night. I think the minimum age at which children should be employed in factories should be ten; the physical development of children in India is bad A certificate of physical fitness, as well as of age, should be required, though the former might not always be applicable. A child's age certificate would show when he or she had reached the age at which they could be employed on adult work. I think young children should be prohibited from accompanying workers to dangerous and unhealthy parts of factories. The managers would probably be glad to co-operate in carrying out this prohibition, though it might cause more difficulty in obtaining women workers who are perhaps unable to have their children looked after at home. I think one latrine seat for every twenty-five workers is a large proportion, and need not be insisted on; where there is no septic tank installation, separate urinal accommodation should be provided. I am acquainted chiefly with operatives in iron works, jute mills, jute presses, cotton mills, flour mills, and rope works. They do not compare unfavourably as to healthiness with the non-factory population of the same class. I have no statistics on this point. I have not noticed that the physique of the factory population differs materially from that of the general population. I am not aware that they suffer more from any specific classes of diseases. The most suitable method for determining approximately the age of children would, in my opinion, be a consideration of the general appearance and physique. I have no faith in the dentition test. I cannot tell at what age, on an average, the different permanent teeth appear in Indian children. I have no knowledge of any intentional evasion of the law as to the employment of children in factories. I do not think whole-time medical inspectors are necessary.

ral evidence.

Witness stated that he had had one year and ten months' experience of factories. He visited the factories to certify children's ages when requested to do so by the manager, but he gave no notice of his ordinary inspections. He tried to visit each factory twice a year. He had only seen three or four children under nine years of age working. He brought these instances to the notice of the manager, and the children were ordered away. He did not institute a prosecution. He reported the matter to the Magistrate, and there his responsibility ended. Witness only examined those children who were brought before him; he had never tried to check the half-timers' register with the half-timers actually working in the mill. Witness would not say that the children were in bad health, but he should like the minimum age raised to ten. Witness had never asked a mill manager if any half-timers were employed on full time. He considered the mill hands healthy as a class. There were iron works in his district, but he had never come across a case of steel grinder's lung. In comparison

with other children, he did not think that the mill children were overworked, but no child under ten ought to do more than half a day's work. If all non-working children were excluded from the mill it might affect the supply of female labour. Lt.-Col. Drury.

WITNESS No. 159.

Major W. D. Hayuard, I.M.S., Police Surgeon, Calcutta.

In my opinion the working hours should not be longer than from 5-30 A.M. to 6 P.M. or 6 A.M. to 6-30 P.M., with an hour's interval at midday, and shift work should have a maximum of twelve hours' work out of the twenty-four for any worker. In Calcutta I have not observed any deterioration of the physique of workers due to long hours. I have not observed any appreciable number of cases of the employment of children between the ages of fourteen and sixteen as adults, and have not observed any physical deterioration which could be ascribed to it. I do not think it advisable to create a class of "young persons," but think that the age for children should be fixed as from nine to sixteen years. The employment of women at night should be prohibited. I think that the minimum age for children employed in factories should be left at nine years, but that they should be kept at light work, and away from running machinery and very dusty rooms; also that the age for children should be fixed as from nine to sixteen years, and not nine to fourteen years as at present. I am of opinion that the medical inspector should be able to refuse certificates to any children whom he considers unfit for factory labour, irrespective of their age. I think it would be advisable that, before half-timers are allowed to work as adults, they should have to obtain a certificate as to age and physical fitness from the medical inspector. I do not think it either necessary or advisable to legislate for the provision of elementary education by the factory owners for the children working at their factories. I think it not practicable to prohibit non-working young children accompanying their parents from working, without seriously interfering with the supply of labour. I think that factory owners should be asked to discountenance the practice as much as possible. I think it sufficient if the standard of latrine accommodation be fixed at one seat to every fifty workers. Separate urinal accommodation is advisable. I think that all doors of working rooms should be made to open outwards and easily, and that this should certainly be prescribed by law in all jute presses and mills, and in all factories where there is any considerable danger of fire. I think that an attempt should be made to secure uniformity in the administration of the Factory Act throughout India, due allowance, however, being made for local and provincial differences in conditions. For the proper carrying out of the inspection of factories, and for ensuring that the provisions of the Factory Act are duly carried out, I think it is quite necessary to appoint full-time medical inspectors, forming part of a medical inspecting department, working under the Department of Commerce and Industry. I am acquainted with operatives in 57 different Calcutta factories; over a quarter of these are jute mills or presses and the rest are varied in character, including iron foundries, two lac factories, two or three printing works, a bone mill and other miscellaneous industries. My experience leads me to believe that the average healthiness of the operatives is equal in every respect to the average of the same class not employed in mills or factories. I cannot give statistics for this. The factory population is in my opinion quite equal to the average as regards physique and does not suffer any more than the general population from any specific diseases. I cannot give statistics. Sufficient and frequent personal observation and inspection of the mills is in my opinion the only way to make sure that children under age and other unfit persons are not being employed. I am of opinion that it is only by considering the dentition, the general appearance, development, physique, etc., that it is possible to come to a generally correct estimate of a child's age. Dentition is the best test we have; still it cannot be relied on alone, and the general appearance must be taken into account also. The dates of the appearance of the teeth, as I have generally observed them, are— Major Hayward. *Written evidence.*

Central incisors	7th year.
Lateral „	8th to 9th year.
Canines „	11th year.
Anterior bicuspids	9th to 10th year.
Posterior „	12th year.
Anterior molars	6th to 7th year.
Second „	13th to 14th year.
Posterior „	18th year.

My experience is based upon actual knowledge that the law is sometimes, but not to any very great extent in Calcutta, evaded as regards the employment of children under the age of nine; this is, I believe, the result of the difficulty in accurately recognizing the age, and to slackness, and sometimes oversight on the part of the mill manager, and not to wilful wrong doing, for the most part. As regards the employment of children under fourteen, as adults, I have not found this done to any extent. I cannot give statistics. I think a medical inspecting service for factories should be created; this should deal with all sanitary and hygienic questions affecting the persons and lives of factory operatives. They should, I think, be health officers, and hold the D. P. H. qualification, and the whole-time officers should be recruited from the Indian Medical Service, chiefly, but kept after selection as a separate department of health officers, under the control of the provincial chief medical inspector of factories, who should be a member of the Department of Commerce and Industry, or of the provincial branch of it. They should not be allowed private practice, and should be given pay approximating to that of their brothers in the sanitary department, and sufficient to attract men to join the department. I do not think it will be practically possible to recruit a very large service of this sort, and think that the general sanitary and certifying work would be best divided

Major Hayward. as is done at present amongst the members of the Indian Medical Service serving locally, who would report to and be responsible to the special controlling medical factory inspector, or his department, as far as their factory duties were concerned. As most of the operatives perform their call of nature before coming to work in the morning, and again after leaving work, I think that it is not necessary to supply so large a proportion of latrine seats as one to twenty-five. I think one to fifty is quite sufficient. At the larger factories and mills, as far as my present experience goes, I should recommend the septic tank system.

Oral evidence. Witness stated that he had 57 factories in his district. He considered that the law as regards half-timers was only evaded to a slight extent. Uncertified children under age were employed; but he had not instituted any prosecutions. The managers promptly sent away any children that he considered under age, and he did not think that the managers were wilfully employing under-age children. In reply to a question as to why no prosecutions had been instituted, the witness stated that this was his first year, and until he had more experience he did not care to take the initiative in the matter. The Union Mill was in his district, and he had inspected it twice since April 1907. The book of certificates kept at the mill showed that no children had been certified in that mill since April 1907. He thought that the Union Mill was a little behindhand in bringing up children for inspection. The fact that no children were brought to him for examination for ten months would excite his suspicion. He visited the Union Mill a few days ago, and 16 children were presented to him to be certified. He considered that adults and children working in the mills compared favourably in health with those in outside employments. He believed that a too rigid administration of the Factory Act would upset the working of the factories, but the employment of children under nine years of age ought certainly to be stopped. In regard to age, the certifying doctor's opinion should be final It would facilitate inspection work if all children had a certificate. He approved of a 12 hours' working day, but not of the proposed "young persons" class. He considered that a youth should be sixteen years of age before he should be allowed to do a full day's work. In witness' experience he had never seen a case in which a child employed in a factory showed any sign of deterioration in health as a result of his employment.

Witness No. 160.

Lieutenant-Colonel C. R. M. Green, M.D., F.R.C.S., I.M.S., Civil Surgeon, 24-Parganas, Alipore.

Lt. Col. Green. *Written evidence.* I have only been inspector of factories since the 18th November 1907, and have not much experience of the work. I am of opinion that the minimum age at which children are allowed to work should be raised to ten. I consider that children should be certified before they are allowed to work in the factories. I should like to see non-working children prohibited from entering any factory. With regard to latrine accommodation, the requirements vary according to the place where the labourers live. In rural areas less seats are necessary, as the coolies ease themselves near their dwellings. In towns one seat for every 25 workers is required. I do not consider the factory population below the average of their class as regards physique. The determination of children's ages must be left to the opinion of the examiner, formed on general grounds. I do not consider the dentition test can be relied on in individual instances.

Oral evidence. Witness stated that there always was a large number of children in the jute mills. The children were certified, or supposed to be certified. It would be a very good thing if only children in arms, and properly certified children, were permitted in factories. He visited the factories at least twice a year, and some four times. It was possible that children worked for half a year without being certified. When he inspected a mill he went to the office and saw the manager. The children were then arranged for inspection, and while they were being got together he inspected the compound, water-supply, and latrines, and then went through the mill. Afterwards he examined the children presented for certificates of age. He received no direct fee from the mill, and no fee for those children who were not passed He received the usual allowance for inspecting a mill; this was R16 and R32 according to the number of hands employed. Only properly certified children should be allowed to work in factories, and Government officers in district dispensaries might assist the Civil Surgeon in this certifying work. Notwithstanding the difficulty in getting about the large mill area, he thought that one whole-time medical man could do all the certifying work. There had been no deterioration in the health of the workers, but it would be advantageous if the minimum age for children were raised to ten.

Witness No. 161.

Mr. C. A. Walsh, Special Inspector of Factories, Calcutta.

Mr. Walsh. *Oral evidence.* Witness stated that in his opinion about 10 *per cent.* of the children employed in the jute mills appeared to be under nine years of age. He had always thought so, but the difficulty in getting definite proof lay in the manner in which the children went about from mill to mill. After his appointment in 1892 he looked into the matter, and shortly afterwards the following correspondence was forwarded to him —

Burdwan, July 13th, 1892, from A. W. B. Power, Esq., C.S., Commissioner of the Burdwan Division, to the Magistrate of Hooghly.

Sir,—with reference to the inspection of the India Jute Mills, Serampore, made by the Special Inspector of Factories on the 24th ultimo, I have the honour to call your attention to his remarks

that no certifying surgeon has yet "certified the ages of the children." I am to request you to point out to the Special Inspector that it is not necessary that the age of *every* child should be certified by that officer, but only in doubtful cases, as ordered in paragraph 3 of Government circular No. I. G. G., dated the 23rd June 1892. a copy of which was forwarded to you with this office No. 210, dated July 3rd following. Mr. Walsh.

The circular in question read :—"The policy of Government in working the Factory Act has been to cause the least interference with manufacturing industries which might be consistent with safeguarding the interests of the children employed. Inspectors, by making the examination of every child compulsory, would give to owners and managers of factories the maximum of trouble and to Government the maximum of expense, without conferring any compensating benefit on the majority of children employed. The wording of section 4 of this Act is perfectly clear on the point that all children whom the Inspector 'has reason to believe' to be under age are to be examined, not that examination is to be insisted on in the case of every child without exception. In the case under notice, therefore, the Commissioner's views of the law and the method of enforcing it were quite correct, while the Magistrate's ideas on these points were altogether incorrect."

Witness now considered this certifying of ages to be specially the medical inspectors' duty. He, however, referred to the matter in his annual report of 1894. He had observed that about 10 *per cent.* of the children seemed to be under nine years of age. He found that they worked until the Civil Surgeon arrived and then, if he did not pass them, they were turned out. These children then went to another mill, where a similar procedure was followed. Witness could not say why he had not issued summonses under the Act in the cases of children obviously under nine years. He could not do more than he had done, as it was not compulsory under the present Act to have all children certified. Witness would not admit that he ought to have prosecuted in those instances where mills were employing children obviously under nine years of age. Pending the medical inspector's visit, when he objected to any young children being employed, the manager turned them out, but they only went to another mill. He reported the employment of under-age children in the Sibpur Jute Mills to the Magistrate, but no prosecution was instituted. Since he was appointed special inspector there had never been a prosecution by him on account of the employment of a child who appeared to him under nine years. This question had really only come to a head with the introduction of electric light. The demand for labour was now so great that the mills took on younger children than formerly. In his opinion the present law in this respect was vague; he had pointed this out to Sir Hamilton Freer-Smith last year, and suggested his obtaining a legal opinion as to whether under the present Act it was compulsory for all children to have certificates. Witness did not reply to the question—"Did you enforce the law as it stood?" In reply to a question as to whether the provisions relating to children in the present Act, amended in 1891, had ever been enforced in Bengal, witness would only admit that the children apparently under age now employed appeared to him about 10 *per cent.* of the total number in some mills. He did not think that half-timers were working full time. In going round the mills it did not appear to him that half-timers were employed as adults, but if the statement made by a mill manager were correct that, if the law in regard to adults were strictly enforced, he would have to close the mill, then that seemed to show that a large proportion of children under 14 years were in fact employed as full-timers. Witness did not consider it possible to administer the present Act strictly in Calcutta. It could be better administered if some of his suggestions had been carried out. He believed in the shifts being changed at fixed hours. He did not think that the shift system was abused, and the working hours in Calcutta were really very short hours. Witness did not reply to the question whether owners and managers of Calcutta mills ignored the law, and suited their own convenience in regard to the hours of employment of children. In framing a new Act the question of the early attendance of children in the morning should be considered, as also the position of the European managers, who were on the premises from 5 A.M. to 8 P.M. There should be one whole-time medical inspector, and two assistants to the special inspector for Bengal and Eastern Bengal and Assam, and a separate inspector for the United Provinces. He approved of the proposal that it should be compulsory for every child to have a certificate of age and fitness before working in a mill. He would prohibit night work for women. He was of opinion that, if it were laid down in the new Act that no child should work before 6 A.M. or after 7 P.M., that would effectually control the hours of labour in jute mills in Bengal. It would not, however, control the hours of the weavers, who had now a much longer working day. To work the jute mills with one shift the working day would have to be limited to ten hours. The Calcutta working hours were reasonable at present, and he did not advocate the abolition of the shift system. On an average there was about one accident a year to non-working children. Witness promised to forward a list of accidents to non-working children since 1892. Witness thought that all children should carry their own certificates, and unless they had their certificates they should be refused work. He thought that one whole-time medical officer could do the certifying work in Calcutta. For the first few months it would be hard, but as the children became registered they would have their own certificates and could go from mill to mill without causing much inconvenience. All the medical certifying officer would then have to do would be to attend to the new cases. Only a very small proportion of new workers would have to wait for more than a day or two. It should be laid down in the Act that the certificates were the property of the children.

NOTE.—Mr. Walsh's written evidence is recorded in the proceedings at Lucknow.

WITNESS No. 162.

Mr. H. M. Scott, manager of the Hastings Jute Mill, Calcutta.

I am of opinion that the working hours of male adults should not be limited (adult male labour is not limited in the United Kingdom). The physique of workers has not deteriorated through the working of present hours. The workers working the longest hours are the weavers; and these all, more or Mr. Scott. *Written evide*

Scott

less, take a 3 months' holiday in the year, and never work more than 12 hours a day. They all take 3 or 4 hours for their meals during the day. I am not in favour of the working hours of mills being fixed. All mills work on the shift system, and there is no need for the engine to be stopped for half an hour during the middle of the day. In all factories the day-shift system is now in operation, with working hours from 5 A.M. to 8 P.M., and with no adult male, in practice, working for more than 12 hours daily. If hours are to be limited, I think it would be advisable to prescribe the third course suggested in point (*b*) of the points referred to the Commission, which is practically the present system of working, without the working hours being limited by law. I am not aware of any illegal employment as adults of persons between the ages of 12 and 14, and have not noticed any physical deterioration in workers between the ages of 12 and 14. There is not, therefore, in my opinion, any reason for the creation by law of a special intermediate class of workers, as suggested. Persons between the ages of 12 and 14 in India are much more matured than those in the United Kindgom at the same age; they are generally married, and beginning to rear families. The introduction of a law such as is suggested might do serious injury under the circumstances. A register of all workers under the age of 16 would be an advantage; but at present considerable latitude would be necessary, and it would be difficult to strictly enforce the law, as no birth registers are kept in India, and it would be impossible to determine the actual age of workers. I am in favour of the prohibition of the employment of women at night, *i.e.*, after 8 P.M. I should say that the present age limit for children should not be raised beyond 9 years A child in India, at this age, is well able to look after him or herself, and is far better employed in a well lighted and ventilated jute mill than in running about outside doing mischief. Children at this age in India are far more advanced than in the United Kingdom, and are not to be compared with the latter at all. If the age limit be raised, it will entail a heavy loss to the parents, with no ultimate good whatever to the children. I should say that certificates of both age and physical fitness should not be required before children are allowed to work in a jute mill. The overseer in charge can pretty well judge for himself as to their physical condition. A provision of this character would, in my opinion, cause no end of trouble. I should say that it is not necessary for young persons over the age of 14 years to have certificates of age and physical fitness, as mill authorities, in their own interest, will not employ persons who are not physically fit. It is not necessary to have a law that children should only be employed in sets, as they are at present employed in jute mills in sets or squads; and there is no need of any change. Millowners should not be burdened by providing education for children in their works. If such a law was brought into force, it would mean that mills were educating children and throwing them into all our large towns as babus or clerks with a small smattering of education, large enough to give them the idea that manual labour was not good enough for them. We have any number like this at present, who would sooner starve than take any other but a babu's work. It is this class who would strengthen the ranks of our *swadeshi* Bengalis. It would be very hard on the parents of children if they were not allowed to have them inside the mills, as they are all more or less poor up-country people, with no responsible person at home to look after the children. Testing air in jute mills is not required, as ventilation is ample in modern jute mills, and everything is done to keep ventilation of the very best for the sake of the workers' health. Jute mills do not use moist air; the air inside is the same as the natural air outside. Jute mills do not use humidifiers, and a standard of purity of water for this purpose is not required. I do not think the latrine accommodation should be raised to one seat for every 25 workers; this seems a useless waste, and in my opinion the fewer of these structures there are about the place the better. We have septic tank latrines, with one seat for every 60 workers, which appears to be quite ample. Separate urinal accommodation should certainly be insisted upon. I do not think any law is required to have all doors made to open outwards, in case of fire, as jute mills have ample means of exit, built as they are. I do not consider any new law is required, as the present one gives the factory inspector full power to order any machine to be fenced in any way he may think proper. I should say that a Factory Act applicable to Bengal would not suit other Provinces in India. I do not consider full-time medical inspectors are necessary. I am manager of the Hastings Jute Mill, Rishra, and the number of hands employed is as under:—

Men	Women	Children	Total.
4,209	905	713	5,827 workers.

This mill, up to the year 1904, ran day and night and the average hours for the past 10 years are as follows:—

Year.	Day work.		Average *per* day.	Night work.		
	Days worked.	Hours worked.		Nights worked.	Hours worked.	Average *per* night.
1898	308	4,009 7/12	13 01	309	2,374 1/2	7 68
1899	305 1/2	3,974 4/12	13	304	2,348 1/2	7 7
1900	308	4,031 1/2	13 09	310	2,384 1/2	7·7
1901	309	4,076 1/2	13·2	310	2,382 11/12	7·7
1902	309	4,062 2/3	13·1	310	2,386 1/2	7·7
1903	305 1/2	4,020 1/2	13 1	303	2,341 1/2	7·7
1904	307 1/2	4,360 1/2	14·1	134	1,029 1/2	7·68
1905	303 1/2	4,549	15	..	..	..
1906	287 1/2	4,013	13 96	..	..	..
1907	304	4,560	15	..	..	..

During each of the years from 1898 to 1903 the mills worked on 158 days only for over 12½ hours a day. I cannot give any figures as to the economical working of a jute mill based on the length of the working day. Production and wastage depend greatly on the labour supply. If certificates of physical fitness and age are to be required, prior to a half-timer being employed, I should say these half-timers ought to be allowed to work until the medical inspector comes round, when all who had not been certified could be brought before him. If these half-timers are forced to have a certificate before being allowed to work, it will cause no end of trouble and worry, as children, as a rule, have a natural dread of the medical officer. The medical inspector could pay monthly visits; and all workers who were without certificates could be brought before him, and certified as being of age and physically fit. If no half-time worker is to be allowed to work as an adult, unless he be certified as physically fit and of age, I think this would cause great inconvenience to mills, and be difficult to give effect to. If the mill overseers in charge of departments considered the person physically fit, and able for his or her duties, I see no reason why that person should not be allowed to work. If any person was brought before the medical inspector, and rejected as being physically unfit or under age in one mill, he or she would go from mill to mill, until eventually passed by the inspector. The European overseer, to my mind, is the proper man to say whether a worker is fit for his or her duties. I am not in favour of the creation of a class of young persons; if such a law be brought into force, it will reduce the working hours to the number of hours that these persons are to work; on the other hand, they could be worked in shifts, the same as half-timers; but this would entail extra expense in production. The percentage of adults is 57%, of women 16%, of young persons 15%, and of half-timers 12%. I am not in favour of a definite time limit for working hours being fixed for adults, as overtime, when effecting repairs, would then be impossible. Jute mills are all worked on the shift system, and there is no need for a time limit. I am not in favour of inspectors being brought from the United Kingdom. The working of a jute mill in India and the conditions surrounding the workers are so entirely different from those at home that home training would be of little use. The language difficulty, too, would place the home inspector entirely in the hands of his interpreters. If a new Factory Act be brought into force, with radical changes, let it be brought in gradually, especially where age limits are concerned. There is no need of a law forcing millowners to provide house accommodation for their workers. Millowners are giving this matter their very best attention; and it is to their interest to provide good quarters, so as to keep labour. The labour in our jute mills for years past has always been very short in the months of April, May, and June. I would suggest that a means be introduced whereby unemployed men working on famine relief works could be drafted down to our jute mill centres, where ample employment could be found for them.

Mr. Scott.

Witness stated that he had had eighteen years' experience of the jute industry in India. The change in the system of shifts took place at 6-30 P.M., and the workers on the night shift went on then until 2-30 A.M., at which hour the mill was closed till daylight. In the long days they would work 13½ hours by daylight, followed by eight hours at night. Since 1906, however, all night work had been abandoned owing to the scarcity of labour. The operatives preferred day work, and the good worker always preferred day work because he had a longer time during which to turn out his work. As long as there was a surplus of labour night work was all right, but the production *per* hour was not so high as during the day. For their double shifts they had separate staffs of Europeans. The weavers were not worked in shifts. It would be troublesome to work the weavers in two shifts, owing to the difficulty in arriving at an accurate calculation of their outturn. The hours of the weavers were from 5 A.M. to 8 P.M., but the operatives never worked more than 11 hours a day. The hours were arranged in sets of four, and three men worked while the fourth man was free. On an average each weaver was out three hours a day, which left him twelve hours at the looms. The weavers were up-country men, and took from three to four months off each year. They also had about four extra holidays a month. Witness was of opinion that no native would kill himself by hard work. They did not go to their country for long intervals of rest because the mill work was over-exhausting. He saw no signs of deterioration in the health of the mill hands, who were better fed and clothed than persons in outside employments. Formerly the weaving labour was recruited from Bengal, but now the looms were worked by up-country men, who were able to afford their holiday by reason of the high wages they earned. He did not think that they came to Calcutta in order to work at high pressure and earn as much money as possible in a given time. If they had an eight hours' day they would go away for their holidays just the same. The men did not know their own minds, and had struck both for longer and shorter hours. The half-timers were arranged in squads of 14 boys each and never more than ten boys were working at one time. The *sirdar* arranged the half-hour interval for the boys, who knew exactly at what hours they had to come and go. Even though no particular half-hour was specified on the half-timers' time-schedule, yet the half-timers actually received a definite half-hour off in addition to the odd minutes wasted here and there. The half-timers sets were properly arranged, and a boy would stop working if he did not receive his half-hour interval. He considered that their system for the half-timers complied with the Act. There had never been any complaints about it, and if it were wrong he should have expected the factory inspector to say so. Witness was opposed to any restriction of hours. In the Calcutta day of from 5 A.M. to 8 P.M. no spinner worked over 9½ hours, which was not too much. He approved of the children attending when the mill opened. In the hot days it was better for them to work in the cool of the morning than the heat of the day, and in the cold weather they were better off in a warm mill than outside. All labour that came from a distance was allowed to leave earlier to make up for the time lost in coming to and returning from work. They had no man working for over 12 hours, so a restricted 12 hours' day would not personally affect them. There would be some trouble with the weavers who could not work in two shifts, and if they stopped the looms for two hours in the middle of the day it would upset the work of the place. Both in the forenoon and afternoon a number of looms were always idle at present, but witness did not see where the benefit would come in by having a fixed 12 hours' day during which time the whole energies of the weavers would be concentrated on the looms. He did not think that a 2 hours' stoppage

Oral evidence.

Mr. Scott.

in the middle of the day would be economical, while they would not work harder if their hours were reduced. A single shift of ten hours would punish the workers, because they did not work so long a day at present under the double-shift system. Personally, a 10 hours' day would mean less work for him, but it would cut down the production of the mill by one-third. The shift system had always been in vogue in jute mills, even before the introduction of the electric light. He presumed it was because the profits of the jute mills were smaller than those of cotton mills, and so they found it necessary to work longer hours. Witness considered twelve hours a long enough day for any worker To his knowledge there was no slackness in the administration of the law relating to half-timers. The doctor came once a quarter to examine children, and every boy inside their mill could produce a certificate. If the law in regard to the ages of half-time children and adults were strictly enforced it would not inconvenience them in any way. Witness had no objection to the enforcement of the law in this respect, as it stood at present. He approved of women coming to work at 5 A M. He considered that that hour could be called a day hour. While he saw no necessity for a standard of purity of air, yet he had no objection to it being provided for in the Act. They would gladly make any alterations in their mills which would be advantageous to the health of the workers. He had no objection to the proposed class of "young persons," if they were allowed to work twelve hours a day, as none of his workers did work twelve hours a day. He had never found boys under 14 years working as full-timers, but had not specially directed his attention to that point. He had no desire to work boys for three months before examination, and he thought that the doctor ought to come round at least once a month. The mill paid for and retained the certificate of the boy. To meet the age difficulty he suggested the compulsory registration of births, and did not think that a whole-time medical officer for certifying work would be practicable. He had no objection to the strict enforcement of the present law relating to the employment of children, and considered that the best way of doing this would be by letting the inspectors inspect the boys while at work. If it were laid down that no child could be employed without a certificate, then it would inconvenience factory work unless these certificates could be obtained daily. They required facilities for the daily inspection of children. The children kept to their proper sets, and to prevent any infringement of the law separate registers of the sets could be kept. He saw no necessity for putting any limit to the number of days during which a boy could work before obtaining a certificate. At present in their mill perhaps 2 *per cent.* of the half-time children were under nine years of age; that was to say, 2 *per cent.* out of 713 children. He estimated that about 6 or 7 *per cent.* of the young full-time spinners were under 14 years of age. It would not inconvenience their working if the 6 or 7 *per cent.* of young adults were relegated to the half-timer class, and the 2 *per cent.* of young half-timers were discharged. There was no scarcity of labour now, but there always was in the long days, when the up-country labourers took their holidays. The latrine accommodation was one to sixty of the total complement of hands. This proportion would be considerably reduced if they compared the seats with the number of hands in the mill at any one time. He was not sorry that the electric light had been introduced as it was more profitable to everyone.

Witness No. 163.

Mr. G. B. Dunn, manager of the India Jute Mills, Serampore.

Mr. Dunn. *Written evidence.*

I am the manager of the India Jute Mills, Serampore. We employ 3,196 men, 879 women, and 592 children, making a total of 4,667 hands. A statement is appended showing the number of working days in each month of each year since 1898:—

	Number of Working Days.									
	1898	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.
January . .	25	26	26	27	27	26	26	26	25½	26
February . .	24	24	24	24	24	24	25	24	23	24
March . .	27	27	27	26	26	26	26	26	26	26
April . . .	26	21	25	26	26	26	26	23	25	26
May . . .	26	27	27	27	27	26	26	23½	27	27
June . . .	24	25	25	25	24	24½	25	25	24	24
July . . .	26	25½	25½	26	26	27	26	26	23½	23½
August . .	27	27	20	27	26	26	26	27	22	27
September . .	26	26	25	25	26	23	26	26	22	25
October . . .	23	23	23	25	24	26	23	22	27	23
November . .	26	26	26	26	25	26	23	25	26	25
December . .	27	26	26	26	27	27	26	26	14	26
Total working days	307	303½	299½	310	308	307½	304	299½	285	302½
Average working hours *per* day .	14·23	14·21	14 21	14 23	14·22	14·2	14 23	14 27	13·3	14·24

. I am of opinion that work should commence at daylight and continue throughout the day by the usual day-shift system up to 8 P.M., but under no circumstances should an adult work more than twelve hours out of the twenty-four. I do not think the health of any worker is impaired under the present working conditions with the freedom they enjoy and the lightness of the work they are asked to perform; it is also the general custom to take a month or two's rest if they feel sick. This they never hesitate to do and the custom is followed by all— men, women, and children. I see no need to create a special class of workers called "young persons," *i.e.*, those between 14 and 16 years of age, with the object of safeguarding their health or restricting their hours, as the very lightness of their work and the healthiness of their surroundings make them what I have always found them to be, the brightest and healthiest squad in the whole mill. Again, if the hours are restricted, it will mean another shift to enable the manufacturing process to proceed; this will not only severely handicap the mill through shortness of labour, but these workers will refuse to work for the smaller wages corresponding to the shorter hours. I have 150 workers in the spinning department alone, out of a total 459, between 14 and 16 years of age. I consider the age of nine a very suitable age for children in this country to begin work, as they are very active and learn quickly. They are attached to a squad numbering 14 boys, under a *sirdar*, and this set have to doff bobbins from the spinning frame, a certain number of frames being allotted to each set, according to the size spun. The doffing process generally lasts 25 minutes, after which the children rest or play about for 10 to 12 minutes, so that out of a total of 7 hours' attendance they rest about two hours. I attach our shift regulation showing the system in force. The factory inspector visits the mill every quarter and examines the children appointed since his previous visit; it would be a decided hardship, and very difficult, to maintain our complement of workers, if children are not allowed to work before being certified. The practice of bringing non-working young children to the mill is discouraged as much as possible. I consider one and a half seats for each hundred workers ample latrine accommodation. Any precautionary measures suggested by the inspectors for fencing machinery are promptly carried out. Mr. Dunn.

Arrangement of working in the factory.

ADULTS.

Male or Female	Commencing hour.	Closing hour.	Period of shift.	Total working hours.
A. Squad	5 A.M.	8 A.M.	3 hours.	9 hours.
	9 „	3 P.M.	6 „	
B. Squad	5 „	9 A.M.	4 „	
	12 „	3 P.M.	3 „	11 „
	4 P.M.	8 „	4 „	
C. Squad	9 A.M.	2 „	5 „	10 „
	3 P.M.	8 „	5 „	
D. Squad	5 A.M.	9 A.M.	4 „	
	10 „	12 „	2 „	11 „
	3 P.M.	8 P.M.	5 „	

CHILDREN.

	Commencing hour.	Closing hour.	Period of shift.	Total working hours.
A. Squad	5 A.M.	9 A.M.	4 hours.	7 hours.
	12 „	3 P.M.	3 „	
B. Squad (1)	9 „	12 A.M.	3 „	
	3 P.M.	5 P.M.	2 „	7 „
	6 „	8 „	2 „	
(2)	9 A.M.	12 A.M.	3 „	
	3 P.M.	6 P.M.	3 „	7 „
	7 „	8 „	1 „	

Oral evidence. Witness stated that he had had experience of jute factories in India since 1900, and during the last sixteen months had acted as manager. They had a regular system of hours and sets for the children who were not employed over seven hours a day. In the evening hours, when very few children were working, the mill suffered in production; but so far as he was aware, children from other shifts were

Mr. Dunn.

not brought on to work then. The management of the half-time shifts was left to the *sirdar*, and the mill had no means of detecting any irregularities on his part. Witness was not in a position to say that the law was carried out to the letter, because there was no means of checking the *sirdar*. The supervisor and babu time-clerk were in a position to detect irregularities, but so far none had been brought to witness' notice. The children were only paid a certain sum, and no more was given even if they worked longer hours. Witness approved of limiting the working time of adults to a maximum of 12 hours a day. His mill started at daylight, and worked till 8 P.M., which gave an average of 14½ hours. The spinners had a system of shifts, and the weavers relieved one another, extra weavers being always employed for this purpose. They expected a certain outturn *per* day from the weavers. They estimated the maximum outturn from one machine at 350 yards, and after allowing for stoppages, etc., the weaver was expected to produce 280 yards a day. The Civil Surgeon visited the mill once a quarter, and occasionally rejected children as under age. The time-babu or *sirdar* could, however, easily keep children from being examined, so witness could not positively declare that all the children in the mill had been examined. In going round the mill he had seen children who appeared to be under nine years of age. The names of all children were entered in the register when they were admitted to mill employment. It would inconvenience the mill if children had to obtain a certificate before working, but otherwise the strict enforcement of the law in regard to the ages of half-timers and adults would not cause them inconvenience. If their mill were inspected they would find a larger percentage of full-timers who would have to revert to half-time work than of half-timers who would have to be discharged as being under age. He estimated that among the young full-time spinners from 12 to 15 *per cent.* would have to revert to half-time, and about 4 *per cent.* of the half-timers would have to leave. The strict enforcement of the law in this respect would not affect them, and as manager he had no objection to the law being strictly enforced. He did, however, object to the examination of the children before working. He thought that mills ought to be allowed to keep the children until the arrival of the Civil Surgeon. Neither the Civil Surgeon nor the inspector had ever called his attention to the fact that he was employing under-age children. In the long days the labour supply was short, but children were not worked overtime in consequence. He employed sack-sewers, who worked as they pleased.

Witness No. 164.

Mr. G. Cabral, manager of the Ganges Valley Bone Mill, Uttarpara.

Mr. Cabral.
Oral evidence.

Witness stated that his mill employed 200 men, 45 women, 12 boys, and 2 girls. The working hours were from 6 to 11 A.M. and 1 to 6 P.M. all the year round. The children worked for seven hours, from 7 to 11 A.M. and from 1 to 4 P.M. They were employed in cleaning bone sinews, but in reality they were not required in the mill and they merely assisted their parents. He recruited his labour mostly from the *chamar* class, but could not obtain as many hands as he would like. Their wages ranged from ₹ 8-8 to ₹15 a month. Each crushing machine had a fan which carried the dust into the dust chamber, where it settled and the air escaped. There had been no cases of anthrax, blood poisoning, or poisoned fingers. He only used steam for driving the engine in the engine room. He had no objection to a fixed twelve hours' day, which would not affect him.

NOTE.—The witness did not submit written evidence.

Witness No. 165.

Mr. Hemendralal Chaudry, of the Bengal Luxmi Cotton Mills, Serampore.

Mr. Hemendralal Chaudry.
Written evidence.

The working hours of adult males may be limited. As compared with people doing other work outside the mill for shorter hours, the physique of mill workers is in no way inferior. Not less than 12 and not more than 14 hours should be fixed as the day's work. I would, however, stick to 13. The existing rules will be sufficient to enforce the restriction. The legal working hours in Bengal mills should be from 5 A.M. to 11-30 A.M. and then again from 1-30 P.M. to 8 P.M. If, however, the working hours are restricted to 12, they should be from 5 A.M. to 11-30 A.M., and from 1-30 P.M. to 7 P.M. in summer, and from 6 A.M. to 11-30 A.M. and then again from 1-30 P.M. to 8 P.M., in winter. The engine should be stopped in such Bengal mills as do not work by shifts for two hours in the middle of the day, *i.e.*, from 11-30 A.M. to 1-30 P.M. My reason is that the Uriya and Bengali workers do not take their meals within the mill, and must be given at least two hours to prepare their food and have their breakfast. No illegal employment, as adults, of persons between the ages of 12 and 14 has come under my notice, and I am not, therefore, in a position to say whether there has been physical deterioration in consequence. I do not think the creation of a special class of "young persons" necessary; considering the rapid development brought about by the climate of Bengal, persons above the age of 14 may fairly be taken as adults. I do not think it desirable that a special register of all workers under the age of 16 should be maintained. There is a separate register in Form E, under rule 24 of the rules under section 18 of the Factories Act, shewing the names and other particulars of children admitted to employment in the factories. This is, I think, sufficient check. The employment of women at night, after 8 P.M., may be prohibited. Women are mostly piece-workers, and even where they are paid by daily wages, we are not strict as regards their attendance. Where a woman's husband and children are employed with her, we must let her leave the mill at convenient hours to enable her to prepare meals for the family. If we do not shew this leniency we run the risk of losing the whole family. It is not at all desirable to raise the minimum age at which children are allowed to work in factories beyond nine. Many of our girl employés are married at

the age of ten. Much valuable work is done by these girls, and if the age is raised as suggested the work must necessarily suffer. Certificates of both age and physical fitness are taken in respect of children. It is neither necessary nor practicable to take certificates before they are allowed to work. The Civil Surgeon has not the time nor is it convenient to send to him for examination children singly. As a separate age certificate register is kept for half-timers, it is not necessary to require a second certificate when a half-timer, on passing the prescribed age, is transferred to the class of adults. The children are, as a rule, employed in regular sets. I have no objection, therefore, to their being so employed. I would prefer morning and afternoon sets. It is very desirable that primary education should be given to children working in factories, but where the number of children of the same province speaking the same language is too small, it may be impracticable to arrange for it. In Bengal mills it is, I am afraid, impracticable. No rule should be made prohibiting non-working young children from accompanying workers to the different parts of the factory. Such a prohibition would be impracticable in cases of whole families employed in the mill. In a cotton mill children accompanying their mothers have not to go to a dangerous or unhealthy part of the factory. The factories in India are, as a rule, properly ventilated. There is, therefore, no necessity for samples of air being tested. A factory inspector with sufficient common sense, and the Civil Surgeon who visits the mill periodically, are enough for purposes of ensuring proper ventilation. No attempt is necessary to prescribe a standard of moisture for the air in factories. In Bengal especially it is not required. I have no objection to the fixing of a standard of purity for the water used for humidifying purposes. But I think it is hardly necessary, as the humidifiers won't work if the water is not perfectly clear, and absolutely free from dust, etc. The latrine accommodation may be raised to one seat for every 40 workers. The mill hands get sufficient time to ease themselves at home before mill hours or during the 2 hours' leisure at midday. All doors of working rooms on the ground floor of the mill should, I think, be hung so as to open readily from the inside outwards, in case of fire. It is not necessary for the 1st or 2nd floor. Further precautions for fencing machinery are not necessary. Owing to difference in conditions, it is neither desirable nor practicable to make arrangements to secure uniformity in the administration of the Factory Act throughout India. The present arrangements for the inspection of factories are quite sufficient, and full-time medical men are, I think, unnecessary. I am manager of the Bengal Luxmi Cotton Mills, Serampore. In this mill there are at present 835 men, 213 women, and 83 children. This mill came into our hands about 17 months ago. During the time we have worked the mill, it has worked 13 hours a day, including 3 hours cleaning on Saturdays. The average daily number of hours for the year has been nearly 13. No time limit within which children employés should be allowed to work, pending examination for a certificate, is desirable. It may be inconvenient to the Civil Surgeon as well as to the factory. His periodical visits to the factory are the proper occasions for examination. There should be no definite time limits within which only the employment of operatives would be legal. A maximum number of hours should be fixed, leaving it to the discretion of each individual employer to settle the time for the commencement and the termination of the day's work. The cotton industry in this part of Bengal, where it is comparatively a new institution, demands, I think, special treatment in respect of child and female labour, and the number of working hours. I think that the existing arrangements for the inspection of factories are sufficient. Training of inspectors in England or obtaining inspectors from the United Kingdom would mean additional expense. I consider it essential that any law which it may eventually be decided to introduce, if more stringent than that at present in force, should contain provisions introducing a certain amount of elasticity in its actual operation. But I am not in a position, in the absence of any definite statement of the lines of the contemplated legislation, to suggest how elasticity should be provided for. I am strongly of opinion that house accommodation for factory hands should be provided by each factory, wherever practicable. These houses should be under the supervision of the mill doctor, and should always be looked after. Leaving the factory hands to provide for themselves invariably results in spreading sickness amongst them.

Mr. Hemendr Chaudry.

Oral evidence.

Witness stated that he had had eighteen months' experience of the cotton industry. The working hours of the mill were from 5 to 11-30 A.M. and from 1-30 P.M. to 8 P.M. In Bengal they liked a long midday interval, during which period the Bengali, Uriya, and Behari went home for their meals. They had to recruit labour also from Jubbulpore and Madras, and these men had their meals brought in at any time in the morning. They did not work by the shift system. The engine ran for 13 hours, but he estimated that the men actually worked for about nine hours only. He could not check the going out, and allowed 30 *per cent.* of passes. They wove up to 50's weft and 30's warp, and obtained their cotton from the Bombay side. They had never tried shorter hours, but on Saturdays the engine was stopped from 1-30 to 4-30 P.M. for cleaning up. Only a few mechanics came to the mill on Sundays. The half-timers worked their whole six and a half hours in one shift. They had no boys under nine years of age, and the half-time system was not abused. The Civil Surgeon visited the mill every three months and inspected the new children. They did not grow any cotton in that district. A fixed twelve hours' day would affect the production, and he did not think they could make the men work harder. The cotton mill work was much finer, and required more patience, than jute mill work, so they could not be too strict with their men. They worked on Sundays to make up for certain holidays, but there were five holidays in the course of the year which were never made up. Very few Bengalis worked in the spinning department, which contained both rings and mules. He would employ Bengalis as spinners if they would come. He saw no hardship in making the half-timers come to the mill at 5 A.M. The management staff, including an inside European manager, worked the full hours. Women were only employed at present for 11 hours. He considered that "day hours" included the time from 5 A.M. to 8 P.M. The women employed as winders and reelers worked for 11 hours, but the machines on which women as well as men are employed are generally kept running for thirteen hours—the frames being sometimes watched by the back tenters and sometimes by workers minding other frames. A few frames could sometimes be conveniently kept idle when there is a surplus stock. There were no women in the weaving room. He considered that the workers were a healthy class of

Mr. Hemendralal Chaudry.

men. The hours fixed for the proposed class of "young persons" would determine the working hours of the mill. He had provided houses for 80 *per cent.* of the workers. A family paid 12 annas a month for two rooms, one measuring 18 by 12 feet and an inner room 18 by 6 feet. As the cotton industry was new to Bengal, he hoped no severe regulations would be passed concerning the employment of labour, and the working hours ought not to be curtailed. He approved of girls of eight working in the mills, and thought that women should be allowed to work as long as the men. They wanted more child labour, but at present they did not employ any below nine years of age.

WITNESS No. 166.

Mr. A. Wighton, Chairman of the Indian Jute Mills Association.

Mr. Wighton. *Written evidence.*

I represent Samnuggur, Titaghur and Victoria Jute Mills. The number of hands employed is as follows —

	Men	*Women.*	*Children.*		*Total.*
Samnuggur	4,328	1,649	828	=	6,805
Titaghur	8,560	2,195	1,644	=	12,399
Victoria	5,347	1,238	832	=	7,417
GRAND TOTAL .					26,621

These factories, during the last ten years, have worked 290½ days in each year over twelve and a half hours a day. The average daily number of hours for each year has been as follows :—

Year.	*Hours.*
1898	13·91
1899	14·03
1900	13·87
1901	13·50
1902	14·25
1903	14·10
1904	14·20
1905	14·52
1906	13·35
1907	14·44

I am strongly of opinion that the working hours of adult males should not be limited. In jute mills weavers are the only men who might be said to work long hours, but this class of labour is all imported from up-country districts, and it is customary with these hands to take long terms of leave each year, so that they may visit their homes. The physique of the workers in jute mills is certainly not adversely affected by the present working hours. Indeed, there is a strong tendency on the part of operatives to locate themselves at mills working by electric light where, of course, higher wages can be earned. As regards working hours, I am not in favour of any change in the present system. Jute mills are all worked on the shift system, therefore the stoppage of the engine between noon and 2 P.M. is quite unnecessary. I am not in favour of legalizing the starting and stopping time; neither am I in favour of restricting the working hours of adult male labour. It is only in the case of weavers that adult males work twelve hours, and on the average these operatives only work nine months in the year. If a change in the working hours is in serious contemplation, I would favour a twelve hours' day, fixed from 6 A.M. to 6 P.M., and, with the present shift system, no midday interval would be necessary. I do not think there has been any physical deterioration requiring the creation by law of a special class of workers intermediate between the half-timer and the adult, and I do not therefore consider that the working hours of these operatives should be restricted. Jute mills are all built on the shed system, air space everywhere is very ample, and conditions generally conducive to the maintenance of good health. I do not consider a special register is necessary for young persons under the age of sixteen years, as care is taken that young adults are physically fit before being employed. I think it would be reasonable to prohibit women working during the night, *i.e.*, say after 8 P.M. I do not think the age limit for children should be raised beyond nine. The work children have to do is light, and they are not actually employed more than seven hours daily, with a break in between. Very often they are children of parents who come from up-country districts, and I believe they are all the better to be allowed to work in the mill, where surroundings are healthier than in their own homes. There is a large number of children employed in jute mills, and were the age limit to be raised, it would seriously interfere with the working of mills, as there are no other hands available to take their place. I do not think certificates of both age and physical fitness should be required before children are allowed to work in factories. The present system of medical inspection seems to me to be ample. I do not consider it necessary to have certificates of age and physical fitness for children merging into full-time young adults. Care is taken not to employ those who are not physically fit. Children are all employed in regular sets in jute mills, and I do not consider it necessary that this should be prescribed by law. I do not think mill owners should be obliged to provide free elementary education for children working in factories. It might be in the interests of the State to provide free education as in the United Kingdom. At one of the mills

I represent, a school built at the expense of the mill and otherwise substantially aided by the mill was never taken advantage of by the children of the ordinary operative, and the school in question became one for the sons of babus, who would otherwise have sent their children to neighbouring public schools. I had occasion recently to ask some of the weaver class if they desired education for their children, and the invariable reply was in the negative. The parents' aim is to get their families into a wage-earning position as soon as possible. I think it would be reasonable to prohibit non-working young children from accompanying workers to dangerous parts of the factories. The only way such a prohibition could be enforced would be that no non-working child should be allowed inside the mill gates, but to enforce this would probably mean that mothers who are compelled to work for a living would be obliged to leave their young children at home in charge of some one—possibly also more or less a child. I have never known of an accident occurring to a non-working child brought inside the mill with the parents. Jute mills are so well ventilated and so comparatively free of dust that I do not consider it necessary that samples of air should be taken in connection with the prescribing of an analytical standard of purity for air, but all the same I see no objection to having this. I do not think it necessary for jute mills to have a prescribed standard of moisture. No humidifying process is in vogue. As no humidifying system obtains, no standard of purity for water for this purpose is necessary. From actual experience with the latest septic tank latrine installations, it has been found that one seat for every fifty workers is ample. I therefore think it unnecessary to raise the accommodation to one seat for every twenty-five workers. I believe it would be right to have separate urinal arrangements. Jute mills on the shed system all have windows opening outwards, and during working hours doors are never closed. I do not therefore think there is any necessity to legislate in this connection against ready egress in case of fire, but it would be a simple matter to have a sufficient number of doors opening outwards. All machinery in jute mills is carefully fenced, and any suggestions made by the factory inspector are readily given effect to. In India, where the conditions vary so widely in different parts, it seems impracticable to get anything like uniformity. I am of opinion that any legislation should be such that it would be specially applicable to individual Provinces. I do not think full-time medical inspectors of factories are necessary to assist the present inspectors, but some addition to the present staff would be beneficial, so that a monthly visit could be paid to each mill. I cannot make any definite statement regarding to the effect of working days of varying length on the production in jute mills. Production is mainly affected by the full supply or otherwise of labour. From my experience I find that when there is an abundant supply of workers, production is uniformly good, independent altogether of the number of hours worked. Wastage in the spinning department as well as the weaving department varies little in percentage, as between a long and short day. It is only when labour is scarce that an increase in wastage takes place. As to certificates of physical fitness as well as of age, in my opinion it would be reasonable to prescribe that the time limit within which an employé should be allowed to work pending examination for certificate be regulated by the visits of the inspecting medical officer. The employment of children physically unfit does not obtain in jute mills. Half-time workers are of course children, so far as jute mills are concerned. I consider it would be reasonable were the inspecting medical officer to visit the mills once a month. It would be a great hardship to mills and children alike were mills obliged to wait for a certificate of age and fitness before being allowed to employ children as half-timers. No half-timers are allowed to work as adults until they are of full age under the Act, and care is taken in all cases to see that they are physically fit before being employed as full-time workers. I am not in favour of the creation of a class of "young persons" as in the United Kingdom. Under the present shift system persons over fourteen years of age are adults, and were the present working time restricted to less than eleven hours, this would interfere with the running time of the engines as now obtaining. The proportion of women and young persons of fourteen to sixteen years is so large in the batching, preparing, spinning, and winding departments that restricting to less than eleven hours would mean that the work could not run continuously from daylight to 8 P.M. The probable number of young persons employed is approximately one-fifth of the whole, in the departments named. Very few young persons are employed in the factory and calendering departments. I am not in favour of a definite time limit being prescribed by law for operatives other than children and women. I strongly deprecate the introduction of any time limit for male adult labour, chiefly on account of the difficulty of securing, on short notice, trained men, other than the regular staff, for break-down jobs. I understand there is no restriction on male adult labour in the United Kingdom. Should any new legislation be suggested for Indian industries, I think exceptional treatment should be given to such as the jute industry working on the shift system, as against industries working with one shift only as in the case of home mills. I am in favour of inspectors being chosen from India. I consider it essential that inspectors should know the country, the work people, and the language. The mill industry here is so large that the opportunities for training inspectors are ample. To my mind this system would be more practicable than bringing out even trained men from the United Kingdom as inspectors; the conditions of labour generally are so very different in the two countries, that a considerable time would elapse before the home-trained inspector could be fully conversant with the systems obtaining in India. Should any more stringent laws than those at present in force be introduced, I consider it would be only reasonable that they should be more or less of an elastic nature for the first few years. Any radical changes, such as increasing the age limit of children, or creating a class of "young persons," would, on the present system of working, undoubtedly very much upset the smooth running of the works for at least several years. As regards the housing of factory hands, I think it a good policy for the mills to build *pucca* brick houses for this purpose. Indeed, many mills are built in the areas where there are no villages, and owners have to adopt this policy to house and retain the labour which they import. From a sanitary point of view such buildings are beneficial to the health of the workers. It is quite a fact, however, that certain sections of the people prefer to reside in their own bamboo huts. I would mention that a large percentage of the jute mill labour is imported from such districts as Orissa, Madras Presidency, North-West Provinces, and distant districts of Bengal, such as Dacca, Serajgunge, and Behar. The people usually come in families, and one of the attractions to them is that the children are able to get suitable enployment on good

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remuneration. Most of the parents are very poor, and were the age limit of children raised, it would be a hardship for the parents, and probably would keep large numbers of them from coming to the mill areas here. I can say that the health of the mill operatives is really good and probably better than would be the case with the same people in their own homes, where sanitation gets little attention. In the mill areas sanitation is usually carefully attended to, and in the bulk of cases closely supervised by the mill authorities. Filtered drinking water is supplied to all the operatives, both outside and inside the works. In Calcutta there is a feeling that the present is not an auspicious time to introduce changes in the working of mills, where labour generally is absolutely contented. It is well known there has of recent years been a good deal of unrest all through the country, and were radical changes in the working of mills introduced, it is quite possible that such might lead to troubles, which agitators of the political class would be quick to take advantage of.

Oral evidence.

Witness stated that his evidence was based on a commercial experience of the industry. He was convinced that a twelve hours' day would prove less profitable than the present shift system, and that it would be uneconomical for the jute industry. At present no spinner worked anything like twelve hours, and although the weavers were present from 5 A.M. to 8. P.M., yet they had quite three hours off in that time, which reduced their working day to twelve hours. A fixed twelve hours' day for the weavers would be most uneconomical for the mill. He denied that the weavers wanted a fixed working day of twelve hours. Four or five years ago short hours were worked owing to depression in the industry, and the weavers went to their homes saying they would return to work when long hours were again reverted to. On another occasion they decided to close the mill at 3 P.M. on Saturdays for cleaning purposes, but very soon they found their best weavers leaving for other mills where their earning period had not been reduced. If all the mills closed for this cleaning up on Saturdays, matters would adjust themselves, but there was no necessity for legislation in this respect. He considered that the operatives were a healthy class. They took three months' holiday a year and did not need any protection by Government. Their long holiday was not taken because they were exhausted by their work, but because they had land to till and families to see. They came to Calcutta to obtain plenty of money, and in his opinion factory work was popular. Labour was plentiful at present, though this was always so when food was dear. Before the introduction of electric light the operatives took their holiday in the cold weather, and worked their hardest in the long and hot days. But now that the working days had been largely equalised, they took their holidays in the hot weather, and worked hard in the cold weather. He attributed the origin of the shift system among the spinners to the fact that their work was much heavier than that of the weavers. In the early days the industry devoted more attention to the coarser yarns, but now that it had developed they were producing much finer work. Witness was of opinion that if the hours of the proposed "young persons" class were fixed at twelve it would not affect the industry in any way. The formation of this class would not hamper the industry, but he saw no necessity for its creation. It would not affect him if they said that no young person should work more than twelve hours a day. If a fixed twelve hours' day were brought in for the weavers, it would affect production. At present the looms were worked in groups of four, and the machines ran for 15 hours. The men so arranged matters amongst themselves that they actually worked for twelve hours only. It was impossible to work fifteen hours continuously, and the weavers did not do it. Any alteration in the hours of the weavers would cause serious inconvenience to the mills, the different departments of which had to supply the proper quantity of material for the methodical working of the mill, and any change whereby they would require more loom power would be expensive and unworkable. In the case of many mills no extensions could be made. Any proposal of this character would be very objectionable to the trade. Even with a fixed twelve hours' day they would still carry on the shift system, as twelve hours' work was too much for a single shift. A fixed ten hours' single shift was out of the question altogether. It was possible, but absurd to contemplate. His manager took care that no physically unfit children were engaged. He considered that "night hours" might be taken as anything between 8 P.M. and 5 A.M. Generally speaking, he held that the present Act provided for all that was necessary, and if there was a feeling that the provisions relating to children were not strictly enforced, the proper thing to do was to have more inspection, and to administer the Act properly. Generally he would not say that he had no knowledge of children being illegally employed. He believed that children under nine years of age were employed in the mills, and similarly that some boys working full time were under 14 years of age. This did not occur to any great extent, however, and if the practice existed at all it was the duty of the factory inspector to have stopped it. The managers had copies of the Act, and were supposed to carry out its provisions. The children were brought in by the *sirdars*, but were always shown to the European overseers before they were put to work. He would not say that any abuse of children labour must consequently be known to the European staff, owing to the difficulty there was in telling the age of a child. He did not think that the strict enforcement of the Act in respect to children would inconvenience the industry in any way. It would not be a good thing to enforce the provisions of the Act rigidly all at once, however. Mills ought to be given a certain time during which to get over the child difficulty. The probability was that the industry had grown so rapidly that the inspector had not had time to cover the ground. Witness approved of the existing law as regards the employment of children being enforced, but he deprecated any inspector going around suddenly and playing havoc with the mills. They must be given a reasonable period of time during which the problem could be considered. He would not say that the mills had taken advantage of the slackness of the inspection. He attributed the present position to the great difficulty that there was in telling the age of the child. None of the boys employed were physically unfit, and it was doing the boy of eight a kindness to give him employment. The difficulty had arisen owing to the great expansion of their industry, and the scarcity of child labour. Witness thought that it was a hardship to the child to have to attend so early in the morning. He associated himself with the opinions expressed in the letter issued by the India Jute Mills Association in September last. He was of opinion that it was not necessary to have a large staff of medical inspectors, although more were wanted than they had at present in order

to get round the mills. He did not think that a child should be allowed to retain his own certificate, but if the child did do so it would undoubtedly greatly facilitate the medical inspection work. If ample facilities for certifying children were provided, then it would be feasible to lay down that no child should work before examination, but if mills had to wait more than one day it would cause the mills serious inconvenience. On reconsideration, he thought there was no objection to the child being allowed to retain possession of his own medical certificate, but any system of that kind should be introduced in a gradual way. It was the practice in Calcutta for the mill to retain the certificate; he did not know the reason for this. He approved of the appointment of one whole-time medical officer as certifier, if he could visit the mills at least once a week; but witness did not approve of the suggestion to have a station in the mill area to which children would have to be sent for examination. He thought they should have one week's grace during which time the child could obtain his certificate. He would not admit that the practice of retaining the certificate was to keep the children in the mill; it might be adopted in order to prevent them going elsewhere. Some time ago it was the practice in some mills not to have certificates at all, but the certifying surgeons insisted upon obtaining their four-anna fee, and so the children were presented for examination. There was no doubt that a considerable time elapsed between each visit of the Civil Surgeon. The European assistants were at the mill for the commencement and conclusion of work, but had long periods off during the day. A large percentage, more than half, of the European assistants renewed their engagements at the end of their terms.

Mr. Wighton.

Witness No. 167

Mr. D. H. W. Ritchie, Calcutta.

Mr. Ritchie. *Written evidence.*

The mill I represent, as agent, is the India Jute Mill at Serampore, employing—

Men	3,196
Women	879
Children	592

The mill during the past ten years has worked daily, except on Sundays, holidays and during break-downs and occasional periods of short-time. The average duration of the working day throughout that period has been fourteen to fourteen and a half hours. Regarding the effect of working days of varying lengths on (*a*) production and (*b*) wastage and (*c*) economical working of a factory, the output is generally proportionate to the number of hours worked, but the wastage percentage decreases as hours increase, because the greatest amount of wastage is made at the daily start and finish of the various processes of manufacture. The longer the day, in reason, the more economically can a mill be worked, because the increased production, together with the relatively reduced percentage of wastage, materially help towards the reduction of the overhead fixed charges. As regards certificates of physical fitness of children prior to employment on half-time, I agree with, and have nothing to add to, the views and opinions expressed in the Indian Jute Mills' Association letter of the 7th September, paragraphs 4 and 5. I am not in favour of the suggestion that a class of "young persons" be created. The administrative difficulties of discriminating between the three classes, *i.e.*, children (who may be just approaching fourteen years of age), "young persons" (between fourteen and sixteen), and adults (who may just have reached sixteen), would be very great. As the great bulk of the spinning machinery is attended to by young men approximately between fifteen and sixteen years of age, were short hours imposed on them, it would practically result in the entire work of the mill being also limited to these hours. The number of workers apparently between fourteen and sixteen years of age employed in the India Mill is about 220. With reference to the suggestion that a definite time limit should be prescribed, I consider it would be an advantage were the hours of work rigidly fixed by law. In the case of jute mills worked on the shift system, the most suitable hours of work would be from daylight to 8 P.M., which would mean during April—September a working day of approximately fourteen and three quarter hours, and during October—March a day of from thirteen and three quarter to fourteen and one quarter hours. It would be preferable to fix a time limit rather than a maximum number of hours, which latter should not be left to the discretion of individual employers. I am of opinion that the special circumstances of the industry, which vastly differs in its conditions from other industries, call for exceptional treatment as regards administration, and I agree *in toto* with the Association's views, in paragraph 2 of their letter, that each Province should administer its own labour regulations, as at present. I do not approve of the suggestion that inspectors from the United Kingdom should be obtained for factory work in India. The conditions of labour in India differ so greatly from those obtaining in Britain that inspectors would find that what little experience they may have acquired there would be of little or no service to them in India, and until they had spent a certain number of years in the country acquiring the language, and a knowledge of the habits and customs of the people, their position would be more or less a sinecure. Neither do I consider it necessary or desirable that inspectors should receive any training in factories in Britain. There is abundant material amongst Europeans in India, Eurasians, and educated Indians, from which to recruit for the posts of factory inspectors, and ample scope and opportunity for training for such posts here without having to import men, who for the first few years of their residence would be of little or no use. I have no suggestion to make as regards the housing of factory hands, as in most of the jute mills in Bengal where the houses are built by or under the control of the mill, the arrangements are so excellent as to leave nothing to be desired. I do not consider it necessary that the working hours of adult males should be limited, nor do I consider that the physical condition of the workers has been in any way adversely affected by the alleged long hours of work. On the contrary, I should say that, as a body, the jute mill workers, owing to the generally higher rate of pay, regular hours and greater degree

Mr Ritchie.

of comfort have, if anything, improved in physique, and they compare very favourably both in health and physique with any class in Bengal. While I do not consider that the working hours for adult males require to be limited, in my opinion it would be desirable to fix a time limit beyond which jute mills will not be permitted to work. The hours which I think would suit best are daylight to 8 P.M., that is, where there is a shift system. The adult male it is unnecessary to legislate for, as regards the limiting of his working hours. Nothing that employers can do will make any male adult remain at work an hour beyond his inclination. In actual practice he works about nine hours, and in these nine hours there are very many intervals of rest, which intermittent method of working is in keeping with the nature and habits of Indian workers, as clearly recognized by the Labour Committee at page 12 of their report. I, for the same reason as stated above, do not consider that there has been any physical deterioration amongst the children, but rather the reverse. Our experience is (and I think it is that of most of our neighbours) that of all the workers in the mill the so-called "helpless child" is the most independent, and the most prone to leave his work; and, as in the case of the adult, so with the child, nothing that employers can do—even if they wished—would make these men or boys work an hour longer than is their inclination. A large proportion of the childred observable about a mill, where they are chiefly employed as bobbin shifters, are a bright, alert, healthy and vigorous lot of youngsters. Their work is light, and with very frequent intervals, which they usually devote to romping about the premises, they are with difficulty kept out of mischief, which is a sufficient refutation of the charge of physical deterioration, or of overwork. I do not consider it advisable to create a "young person" class of workers for reasons stated. The employment of women at night is not applicable to jute mills, which stop work at 8 o'clock in the evening. I do not consider the minimum age for children should be raised above nine. As regards certificates of age and physical fitness of children being required before they are allowed to work in factories, I agree with, and have nothing to add to, the views expressed in the letter from the Association of 7th September 1907, in paragraph 4. The present law prescribes that children shall not be employed except in regular sets, and this is strictly attended to in mills, and is subject to the special investigation of the visiting factory inspectors (see paragraph 7 of above letter) under the present Factory Act. I consider it would be uncalled for to expect employers to provide elementary education, which is the business of the State and not of private individuals or of a company (see paragraph 6 of the Association's letter). Regarding the suggested prohibition of non-working young children from accompanying workers to dangerous or unhealthy parts of the factory, the latter description does not apply to jute mills, which are neither dangerous nor unhealthy. It would be a hardship to the people bringing these children if they were not allowed to do so as it would mean that these people, having no one with whom to leave the young children, would be unable to attend at the mill. I agree *in toto* with the views expressed in paragraph 8 of the aforementioned Association's, letter. Questions relating to purity of air in factories, and humidifying processes, are not applicable to jute mills. Jute mills, being built on the ground single-floor shed principle, with wide doors and windows every few feet throughout the entire length of all four enclosing walls, which are practically always kept open, render it unnecessary that all doors should open outwards. All dangerous machinery is already fenced in. It is unnecessary to appoint full-time medical inspectors to assist present inspectors, as far as jute mills are concerned. The duties which it is proposed should devolve upon the medical inspectors (as at page 6 of the Committee's report), the most of which are inapplicable to jute mills, are of such a nature as to take up very little of the time of the inspecting officer. To have a dual staff of inspecting officers, going more or less over the same ground, is certain to lead to inter-departmental disputes on points of procedure or of policy, the ultimate sufferers from which would be the mills. Besides, the duties of the medical inspectors being so light, there would be the tendency on their part to go out of their way to introduce many petty fads to the harassment of the mills in question, merely in order to justify the existence and retention of their practically supernumerary posts. It has al o to be remembered that the jute mills are scattered over a large area, nearly forty miles in length, and the time of inspectors would be chiefly occupied in travelling from mill to mill. An increase to the existing staff of factory inspectors would meet the case, if the present staff is insufficient to adequately supervise the carrying out of the Factory Act requirements.

The following memorandum was handed in by the witness during his oral examination :—

The whole question appears to resolve itself into the status (1) of children and (2) of young persons working as adults. Considered broadly the position is this :—

The chief and almost sole need for children in a jute mill is for the very light work of bobbin shifting They are useful at that work entirely owing to the known quickness of movement and manual dexterity appertaining to children, and as they mature they lose in a great measure that early nimbleness of movement. Then as regards the question of the older children (which I will term young persons) taking to the work of adults, this adjusts itself automatically. For instance, to have young persons doing the work of children would lead to inefficiency, as they would be clumsier and therefore slower and more costly. In the same manner to employ children (even did they wish) as adults would tend to inefficiency for many reasons, and as far as our mill is concerned the few older children who may be doing adults' work are so trifling in numbers as to be negligible. Besides, the question of wages comes in, and the older men will promptly object to work alongside of children getting smaller wages, or on the other hand these latter will object to do a man's work unless on a man's pay, and these older children are not as efficient as are more mature men for the special work of attending to spinning, and it would be bad policy to have large numbers of these younger people employed on men's wages, as it would tend to raise the scale of wages, and make children scarce, as the latter would naturally seek to obtain man's work and pay. As regards legislating for young persons, the total number in the mill is about 220, which is only about 4½% of the total hands employed. This statement may beg the question in that, as the percentage is so small, an alteration in the Act cannot

materially affect the mill, but to meet this I would refer to my evidence above. I should say that this figure 4½% would approximately represent the numbers employed in this district, and I question the desirability of invoking legislation (which is generally supposed to be for the greatest good of the greatest number) to meet the case of so small a minority as 4½%. I venture to think that even with the short experience the Commission have had of jute mill labour in their recent visits to mills, they will have already realized the extraordinary sensitiveness of the worker to any changes being made or contemplated in his habits or methods of working, even in the smallest trifles, regarding which he strongly resents interference on the part of the European. They do their work in their own way with ordinary oriental regard to discipline, but they will not tolerate any interference which they think is uncalled for, and any ill-considered or hastily conceived alterations in the Factory Act may result in widespread strikes. Is it worth while, for the sake of a trifling 4½% of the total mill population of 2,00,000 souls, to risk widespread trouble and disorganization, and consequent hardship, in the attempt to remedy a few defects which have been magnified out of all proportion to the real facts? The old theory that the native worker is badly treated, hardly wrought, and badly paid, is, at least as far as the jute mills of Bengal are concerned, utterly at variance with established fact, and if there is any class able to take care of itself, it is the jute mill worker. The Customs Act and the Income Tax Act legislate for certain purposes, but a few instances of smuggling and of evasion do occur, to deal with which further legislation is not invoked, but merely more careful supervision is exercised. Similarly, with the Factory Act; all that is needful to meet the few cases of evasion which are said to occur is to improve the routine for the due observation of the terms of the present Act as it now stands. There always will be lapses, but the machinery of legislation has not yet reached that state of perfection to entirely eliminate the marginal error. Mr. Ritchie.

Witness was opposed to the restriction of adult working hours. He said that that proposal, so far as the jute industry was concerned, only affected the weavers. There was, however, no individual weaver who worked from 5 A.M. to 8 P.M. It was physically impossible for any human being to do so without a rest. The weavers had a shift system among themselves, and the mill employed a number of extra hands to provide for absentees. The jute worker in Dundee did far more work than the Calcutta operative, and it would adversely affect the Indian industry if labour was interfered with here. Witness approved, however, of the working day being limited between definite and fixed hours, which would automatically restrict the hours of adult labour. He would like to see the working day fixed as from daylight until 8 P.M. This would facilitate inspection, and prevent mills working after 8 o'clock, which it was the custom to do now. No extra time was taken in the morning, but the engines sometimes ran until 8-30 P.M. as their mill did not start at 5 A.M. as they had no cooly lines, and the men had to come a long distance, some having to cross the Hooghly. The weavers for the most part were up-country men and lived close to the mill. It would be much better if uniformity as regards working time could be secured by prescribing fixed hours. They had a proper half-timers' shift system. The A set worked from 5 to 9 A.M. and from 12 to 3 P.M. The B set worked as a whole from 9 to 12 A.M. and from 3 to 5 P.M. At 5 o'clock the B set was divided into two parts, one working from 5 to 6 P.M. and the other from 6 to 7 P.M. All returned to work for the last hour, 7 to 8 P.M. If the mill continued working until 8-30 P.M., then the B set children were apparently worked beyond their legal hours. But to meet this B set is divided at 4-30 instead of 5 P.M. A reduction of working hours in the jute trade would affect the industry in competition with Germany, Spain, Austria, Italy, and France. He did not think that there had been an increase in wastage by working the fifteen-hour day. The percentage of wastage, on the contrary, tended to decrease in proportion to the longer number of hours worked. He attributed the origin of the double-shift system to the fact that by the laws of the country the jute mills could not be run in any other way. The reason might also be that a larger outturn was desired. They formerly managed a cotton mill (since burnt down), and in times of fair prosperity it was worked on lines similar to those adopted in jute mills; they had electric light and two shifts. They found the single-shift system to be costly, uneconomical and unsatisfactory. *Oral evidence.*

Witness No. 168.

Mr. J. B. Strain, partner in Messrs. Bird & Co., Calcutta.

I am strongly of opinion that the working hours of adult males should not be limited by legislation, and from personal observation I should say the physique of the workers in jute mills has not deteriorated on account of long hours. If the hours of working are to be limited, I would suggest thirteen hours a day, in shifts, as at present. I do not think it will be advisable to stipulate when the mills should begin running and when they should stop. I am strongly against any legislation whereby mills would be forced to stop the engine for any length of time in the middle of the day. I quite agree that in mills where the shift system is adopted the legal working hours might be fixed at from 5 A.M. to 8 P.M. I do not think there has been physical deterioration by the employment of young persons as adults, and I do not think there is any necessity for creating special legislation for young persons. I do not think there is any call for a special register being kept of young persons under the age of sixteen. In jute mills there is no occasion for women to work at night. I think there should be no change made with regard to the age limit for children; if the limit were to be raised Mr. Strain. *Written evidence.*

Mr. Strain.

the parents would certainly object, as their children more or less run wild until they begin working. The children of mill workers are rarely sent to school. I do not think it necessary that certificates of both age and physical fitness should be insisted on before children are allowed to work in factories. The present Act already insists on children being of nine years of age before they are allowed to work. I do not think it necessary that young persons should be again inspected before they begin working full time. I do not consider it necessary to prescribe by law that children must be employed in regular sets, so long as they do not work more than the regulation hours. Factory owners should not be obliged to provide elementary education at their own expense, because it is not at all certain that such education would be appreciated by the workers, and at the present moment there is certainly no call for any such legislation. All mill managers would be only too pleased to keep all non-working children outside the gates of the mills, but the hardship of insisting on this would fall on the mothers who bring their children in arms, and deposit them near by while they go on with their work. I have never heard of any non-working child being killed in any mill. There are no unhealthy parts in our jute mills. I have no objection to a standard of purity of air being prescribed, as all our jute mills are very well ventilated, and in this respect can scarcely be improved upon. The question of a standard of moisture does not apply to jute mills. As far as my experience goes it has always been found ample if we provide as latrine accommodation one seat for every fifty workers, and this is the basis on which we have built our septic installations; we have, however, in some cases provided additional urinal accommodation. While jute mills are working all the doors are kept open. Legislation on this point is not necessary as far as jute mills are concerned. All the machinery in our jute mills is of the latest type and is well fenced. It is very much to our interest to avoid accidents arising from inefficient fencing of machinery. Uniformity in the administration of the Factory Act, or any Act, is highly desirable. Whether it will be necessary to appoint full-time inspectors of factories will depend very much on the work they are called upon to do. I consider the present arrangement is quite sufficient for the enforcement of the present Act.

The factories I represent are the Union, Standard, Dalhousie, Clive, and Lawrence. The number of men, women, and children employed is as under:—

	Men.	*Women*	*Children.*
Union	2,482	385	376
Standard	3,160	672	564
Clive	4,467	961	935
Dalhousie	2,035	558	415
Lawrence	2,374	107	608
TOTAL	14,518	2,683	2,898

If certificates of physical fitness as well as of age be required prior to the employment of children for half time, a concession ought to be made by which a child might be employed, say, two weeks before he is medically examined, or the medical examiner would require to attend daily at the mills. I think the medical examiner should be asked to attend at the mills at least once a week for the purpose of certifying children. I think it will be unnecessary, in the interests of the young persons themselves, that they should be again examined for physical fitness before being allowed to work full time, and I do not think it necessary to require that any register for such young persons should be insisted on. I am not in favour of the creation of a class of "young persons." If the law be amended to create such a class of workers, and to restrict their hours of employment, the young persons themselves will be the first to complain, and it will certainly disorganize the working of our mills here for some years to come. In the event of the law being amended to restrict the working hours *per* day, I think it would be preferable to fix the maximum number of hours, and leave it to the discretion of each employer to fix the time for commencement and termination of the day's work, and each employer might be asked to send in a return in the beginning of every year notifying what hours he proposes to run for the coming year. The special circumstances connected with the jute trade which have to be kept in mind are that the mills are run on the shift system, so that although the engine at present starts at 5 A.M. and stops at 8 P.M., yet very few of the workers work more than eleven hours a day, and only weavers work twelve hours, and they are all men, so that it would be a great hardship for our jute mills if legislation were to step in and insist on the engine running, say, for a limited number of hours a day. Factory inspectors from home would be of very little use in this country for the first two or three years of their stay here, as it is absolutely essential for such men to have some knowledge of the language. I do not see that it is necessary for factory inspectors to have special training at home, as all that they would be expected to do would be to see the law carried out. If it is found necessary to make the law more stringent than it is at present, it is hoped that there will be provisions made for a large amount of elasticity in its actual operation, and I would suggest that no actual change be made without the public receiving at least two years' notice of such alterations. I have no suggestions to make regarding the housing of factory hands, but I am prepared to show the Commission what we have done and are still doing to make our workers comfortable at our several mills. I would also like to bring to the notice of the Commission the great hardship it would be to our workers if the mills were to be restricted to a working day of, say, ten hours with one shift only; this would mean that 25 *per cent.* of our workers would be thrown idle, and with forty mills in the neighbourhood of Calcutta this would represent about 30,000 idle people, and it would certainly take years before suitable work could be found for all these. It must also be remembered that these workers have been imported by us, and have been trained for particular work, at which they have become expert, and are now able to earn wages varying from R3 to R8 a week; it will therefore be seen what a catastrophe it would be if our mills were to be restricted by law to a ten hours' working day. From enquiries I have made I can say there is no demand on the part of the workers for any change in their position or hours of working, except that all would be pleased to work shorter hours provided they still received the same wages.

Mr. Strain. *Oral evidence.*

Witness stated that he had had over 20 years' experience in India of the jute industry, from the commercial side. In his opinion there had been an improvement in the skill of the operatives. From 5 A.M. to 8 P.M. would be too long for the weavers, if they worked all the time. The Indian worker would not, however, overwork himself, and the weavers had a shift system among themselves. Each weaver was expected to turn out a task which an average man could do easily. They did not expect a weaver to be at his loom for more than twelve hours, and they would be quite satisfied with twelve out of fifteen hours' work. Witness thought that a man could work for twelve hours a day without injury to his health. He could not explain why the spinners had a double shift. It had always been the custom. He estimated that in the five mills controlled by his Company each man on an average wasted one and a half hours a day, over and above the recognized intervals. They had had strikes, and the men could combine to push their views. There had also been an attempt to form a labour union, which he would welcome, in that it would act as an intermediary between employers and employed. The employers would then be able to learn what the strikes were about and to get at the real causes of any discontent. At present it was often difficult to ascertain what the men had struck for. Witness was not present as a mill manager and so preferred to say nothing about the employment of children. He did not think the Act had been rigidly enforced. He considered that the proposed "young persons" class would adversely affect the industry. Personally he wanted no change in the law, but if there had to be a change, then it should not take place for at least two years. Any reforms must be gradual, as nobody knew what effect they would have on the industry. He had no objection to the present Act being rigidly enforced. It did seem rather early for a child to start work at 5 A.M., but he would not call it a hardship as the child would accompany his parents in any case. The same remark applied to the women. The hour for commencement seemed early, but there had never been any complaints about it. Witness thought that the employers were aware of the fact that the law was not strictly enforced in regard to children. The strict enforcement of the law from a given date would be inconvenient, until mills became accustomed to it and had time to make suitable arrangements. He could not, however, object to the law being enforced. If he had to choose some form of restriction on working hours, he would favour a consecutive thirteen hours' run. The present system was quite good, although he would not object if the hours for commencing and finishing were fixed by law. He had no special wish for this, but it would secure uniformity. He considered 5 o'clock in the morning to be a "day" hour; it was certainly not a sleeping hour for any one connected with the jute mills. The European assistants in the mills had stated intervals of rest during the day. They were provided with quarters, and all extra work meant extra money to them.

Witness No. 169.

Mr. D. R. Wallace, Calcutta.

Mr. Wallace. *Written evidence.*

I represent the Howrah Mills Company, which employs—

Men	5,000
Women	1,500
Children	1,100
Total	7,600

and the Seebpore Jute Mills Company, which employs—

Men	4,000
Women	1,500
Children	700
Total	6,200

and the Reliance Jute Mills Company (mill under construction). Howrah and Seebpore have worked an average of 302 days annually, of over twelve and a half hours, for the past ten years. The average number of working hours a day for the past ten years is fourteen and a half hours. The gross production shows an increase *per* day since the introduction of the electric light day of fifteen hours, but is relatively smaller than under the previous daylight hours day, averaging twelve hours throughout the year. Waste is 1 to 2 *per cent.* heavier in the preparing and spinning departments, and manufacturing costs have increased out of proportion to the production by about 5 to 6 *per cent.* The only suggestion I have to make as regards the examination of children and young adults is that the present system of medical inspection be carried out more regularly, and at shorter periods, of all children engaged during the intervals prior to inspection. As regards the older half-timers being employed, as adults, I do not think there is any case for interference, and the medical officer can always inspect the workers at their occupations. Any attempt to lay down hard-and-fast rules would result in seriously handicapping the working of the mills, and lead to real hardship to the workers in jute mills who are not asked, and of themselves are never inclined, to do more work than they are capable of. The conditions of jute mill labour in this country are so different from those at home that I do not think home training would be of any value to inspectors. The time is not ripe for any stringent amendment of the present Act. Workers on the whole are satisfied with present conditions. They are better housed, fed, and clothed to-day than when I knew them first over thirty years ago. But they have grown to be more sensitive, and though cases of strikes and other similar disturbances

Mr. Walla

may in my opinion be generally traceable to some preventible local cause, still these occurrences happening in the present state of unrest in the country, I consider that whatever innovations the Commission may ultimately report in favour of, it is most essential that they be not arbitrarily acted on, but that great elasticity be introduced in giving effect to them. I have no suggestion to make regarding housing. But I believe that sickness in the *bustis* has been less prevalent in recent years than formerly. In view of the apathetic attitude sometimes taken up by local authorities towards proprietors, when the latter for instance are desirous of improving sanitary conditions and other matters on the mill properties affecting the welfare of the workers, I would suggest that certain discretionary powers be vested in the local medical inspectors enabling them to support any desirable improvements the mill may wish to introduce on their own properties, for the benefit of their work people.

Our workers are not averse to the hours they now work, and I do not think the longer hours worked since the introduction of electric light have affected their physique. If a change in the working hours is to be made, I should like to see a sixty-seven-hour week. Work to commence at 5 A.M., stopping at 7 P.M., with an interval of two hours between 11 A.M. and 1 P.M. from Monday to Friday inclusive. Work to be stopped on Saturdays at noon. Or as an alternative 6 A.M. to 7 P.M., with an interval of one hour, noon to 1 P.M., Monday to Friday, stopping at 1 P.M. on Saturdays. This would represent a twelve hours' working day for the first five days, less breaks aggregating at least two hours a day, by the employment of spare hands for relieving purposes in excess of the working complement of adults. And similarly a working day of six hours less breaks for children, who would be employed in two separate sets, one for each of the morning and afternoon periods. Provided always that the engines be allowed to run extra time when necessary for heavy repairs or work in the calendering and packing departments only, but no working of machinery in the actual processes of production of yarn and cloth to be permitted beyond the prescribed time limits. I consider that the creation of a class of "young persons" is not called for on the ground of physical deterioration, and is not possible in practice. The employment of women and children should be restricted to the prescribed daily time limits. The working age of children should not be raised above nine years. The nature of the work they are put to in jute mills is such that they take to it like children at play. Certificates of age and fitness should be required. But mills should be allowed to engage children subject to all new engagements taken on during the intervals between the medical inspector's visits being inspected on his first visit. It would not be desirable, and in my opinion it would be impossible, to carry out adult certificates. The visiting inspector may always inspect the workers at their posts, with a view to detect any likely cases of physical unfitness. Children should be employed in regular sets, one for each of the morning and afternoon working periods. A separate register should be kept of each set for the inspecting officer, to enable him to detect children in any of the sets working in other mills on the same day. Mills should not be required to provide education. It would lead to discontent and ill-feeling. The parents should not be prohibited from bringing non-working children into the mills. It would be an unnecessary hardship to the former. With ordinary care infants need never be exposed to any danger. I have never known or heard of any accident to these children. Purity of air, moisture in the mills, and purity of water, as far as jute mills are concerned, are efficiently safeguarded already. I consider one seat for every fifty hands ample latrine accommodation with separate urinals. Doors to open readily from the inside are not required. Doors are never closed during working hours, and the mills are built on the shed principle, with numerous exits. The existing precautions render further fencing of the machinery unnecessary. I can speak only for jute mills, but am convinced it would be impossible to arrive at uniformity in a Factory Act for all India. The importance of the jute industry is such as to entitle it to special treatment. I would favour full-time medical inspectors provided due care is exercised in the selection of such officers.

Oral evidence

Witness was of opinion that the production *per* hour under the present system was not so great as when they worked daylight hours only. They now worked 25 *per cent.* longer hours, and only obtained from 15 to 18 *per cent.* more production. The present hours of 5 A.M. to 8 P.M. were too long for the economical working of a mill. He considered the economical working hours for an Indian jute mill to be twelve. He also advocated stopping at noon on Saturdays. In the seventies they had a day light working day, and stopped at noon on Saturdays, and everybody was satisfied. Witness would approve of the imposition of the restriction that no adult should work more than twelve hours in the day. Such a restriction would not materially affect the industry in competition with other countries, and would be advantageous in the long run. A twelve hours' day would help the industry, and they would only have to employ a few extra hands, not the large number that the double-shift system necessitated. Witness approved of a two hours' stoppage at midday and thought that the work-people would return sharp to time if it were granted. The present working day was not exhausting, and even the weavers took their own time to do their work. From an economical point of view he approved of a twelve hours' day for the weavers as well as the spinners. Speaking from 34 years' experience, witness thought that there had been an increase in the skill of the operatives; but they were, if anything, more indolent in their habits now than before. Perhaps this was due to the higher wages now paid. A new class of operatives was growing up, but the up-country man was ousting the Bengali. Speaking generally, the Bengali was as skilful as the imported labourer, but had not the same power of application. Witness thought that the shift system was adopted in the early days of the industry only in respect of the children. When the electric light was introduced long hours came into vogue, and so the present systematic double shift was created. In jute mills he thought that from eight to nine hours a day was the actual limit of work to be obtained from a man. He agreed that with a system of relays in the weaving department it would be very difficult to arrive at an accurate calculation of the earnings of each weaver. In the seventies, when so many jute mills were erected, the hours gradually grew longer as the result of competition, and a shift system followed. The system was perfected when electric light was introduced. He thought the amended Act, limiting the hours of women to eleven, was also a factor in the introduction of the present shift system. It was difficult to enforce the amended Act of 1891 as regards the ages of children

and half-timers, and so matters seemed to have gone on the same as they were before the Act was altered. He admitted that the Act was not strictly enforced in this respect. He estimated that from five to eight *per cent.* of children were under nine years, and probably about ten *per cent.* of the spinners were under fourteen years of age. If the law were strictly enforced it would mean putting ten *per cent.* of the spinning department out of action. It would take time for matters to adjust themselves, especially as the younger spinners, who would have to revert to half time, were the best men for the finer spinning. Given a twelve hours' day, the Act could be strictly enforced without inconvenience to the industry. A twelve hours' day would get over the child problem. He would not admit that there was any real and serious abuse on the part of the mills in this respect, but strictly speaking it might be an illegality. He considered that a certain amount of elasticity should be allowed in the matter of the age certificates, and the child should certainly be given a fort-night's grace during which it could work without a certificate. It would be a real difficulty if the child had to obtain a certificate before employment, though he accepted the suggestion that the mill doctor should be empowered to give a provisional certificate pending the visit of the Civil Surgeon. If there was no interference with adult labour, and if a special class of "young persons" were created with hours limited to twelve, the industry would not be affected. Mr. Wallace.

Witness No. 170

Mr. T. W. Clark, superintendent of the Kanknarrah and Kamarhatty jute mills. Mr. Clark.

Written evidence.

I have been connected with the Indian jute mill industry for the past thirty years. During the past seventeen years I have been manager and latterly superintendent of the mills. The Kanknarrah and the Kamarhatty jute mills contain in all nearly 2,200 looms, and give employment to about 14,000 workers. Regarding the hours during which the engines should be allowed to run for productive purposes, I am strongly of opinion that in jute mills the hours should be limited to sixty working hours a week. The hours should be rigidly fixed, so that on Monday to Friday, both days inclusive, the engine shall not start before 6 o'clock A.M., nor work after 6-30 P.M. with a stoppage of the engine for two hours during convenient parts of the day for rest and meal time to the workers. On Saturdays the engine to start at 6 A.M. and cease working at 2-30 P.M. until the following Monday morning at 6 A.M. On Saturdays the engine to be stopped from 9 A.M. to 10 A.M. for rest and refreshment of the workers. The foregoing arrangement would give sixty working hours a week. Some of the advantages to be gained by the reduction of the working hours to sixty a week would be, from the manager's point of view—(1) that a single set of workers would be sufficient to work the mill, instead of two and three shifts, as have now to be employed under the present system of working ninety hours a week. This is a most important consideration. The overseers would get to know their workers individually, and have more control over the accuracy of the pay-sheets than they can possibly have under the continual shifting of the sets. (2) A better and steadier class of workers, less liable to create unrest and trouble than appears to be possible under the existing system. While it is true that although the engines run at present about ninety hours a week, no individual worker on set weekly wages works more than ten hours a day, the grievance is that the work is mistimed. It is one thing to work ten hours during an ordinary day, and quite another and altogether different thing for a man, and especially for a woman, to have to get up at 4 to 4-30 A.M. on a cold, foggy morning, and tramp (as many of them have to do) a considerable distance to the mill, or, when on the last shift, only to be able to reach their homes at 9-30 to 10 P.M., after which their cooking and preparation of the evening meal has to take place. The present system is destructive of all kind of proper family life, and in the interests of humanity a sixty hours' week ought to be the legal limit for work. The interests of the European assistants at the mill ought to be considered. While the actual hours they are inside the mill are not excessive, they are always in the compound, liable to be called at any moment when off duty. The average term of years during which a European mill assistant works in an Indian mill, before going home for good, has shortened during recent years. The Commission would do well to ask for statistics on this point from the various agents for the jute mills. These facts I have mentioned tell their own tale regarding the effects which a ninety hours' week have upon the European assistants. A sixty hours' week would greatly benefit the life of the assistants at Indian jute mills. Any working week of more than sixty hours involves a double shift of workers. Even a sixty-six or a seventy-two hours' working week would bring about a double shift, and personally, if the hours are not to be reduced to sixty, with a single set of workers, I would much rather that the present system of working hours should be allowed to go on, for to limit the hours, say, to sixty-six, would involve the payment of a double set of workers for a short day's work, and would bring up the cost of production much more than at present. The increase of the cost of production under a sixty hours' working week compared with the cost under the present system would be of a comparatively trifling nature. I reckon that, taking the average cost of the production of a ton of hessians to be R120, the reduction to the sixty hours' week would in the first instance increase it to about R127. The cost of producing a ton of hessians in Dundee (our greatest competitor in the manufacture of hessians) is about R180 *per* ton, so there is nothing to fear on that score in reducing our hours in India to sixty hours. Besides, I reckon that during a sixty hours' week the workers would work with more spirit, and there would be a great deal less waste made than under the existing system. A fagged worker towards the end of his long day does not, and cannot, work at his level best, and he makes more waste when in this condition. Under a sixty hours' week, I reckon we would get more and better work *per* hour, and the increase of the R7 *per* ton mentioned above would tend to disappear altogether. I need hardly point out that during the daily stoppages under a sixty hours' week the machinery would

Mr. Clark.

be kept clean and get a periodical rest—rest being as much needed for machinery as for men, and the mill would be a better property at the end of a year than it is at present under the greater tear and wear which the machinery undergoes. If it is decided by the Government to give jute mills a sixty hours' week, the Act should not come into force until on and after the 1st January 1910, in order to allow for the necessary expansion of productive machinery to supply the present and increasing demand, and to allow the surplus of workers to get employment. Factory inspectors should not be men brought from home. It would be a long time before they could be of much use, being unacquainted with Indian conditions of life, and not being able to converse with the workers in their own vernacular. Besides there are plenty of qualified men in India for such posts. Strict provision ought to be made for pure drinking water and effective sanitation at all the mills. The abundant supply of good drinking water at the mills under my superintendence has greatly improved the health of the workers, and has minimized the attacks of cholera and other diseases induced by the drinking of impure water. Septic tank installations have given greatly improved sanitation. They have, of course, to be constantly and effectively supervised to secure the best results. Each mill not already possessing such installations ought to be compelled by law to put them in. My experience is that one seat for every fifty workers is sufficient when the installation is well looked after. In the matter of primary education for the children, I am of opinion that this is entirely a work for the Government of Bengal to undertake, and not for the mills. I quite agree with many of the educated native gentlemen and *zamindars* with whom I have discussed the question, that the Government of India instead of reducing the salt tax (a tax which does not press heavily at all on the people) ought to have taken the money for the education of the common people, including the juvenile workers at our jute mills. I have heard it mooted that it is of importance that there should be only one Factory Act for the whole of India, that all the textile mills, jute, cotton, etc., should all be made to toe the line so far as their working hours are concerned. There is, in my opinion, no necessity for this. Each great industry may have sets of conditions differing from each other demanding a difference in their hours of working, and the amended Factory Act can surely include provisions for differentiating, in case of need, between the requirements of the various industries.

Oral evidence.

Witness stated that the present working hours were from 5 A.M. to 8 P.M. The weavers sometimes started at 20 minutes to five, and went on until 8-30 P.M. It was possible for the engine to run from 4-30 A.M. to 8-30 P.M. A restriction of the present working hours would mean less production, but even if their hours were reduced to ten hours a day, Calcutta could still produce hessians cheaper than any other country in the world. He had obtained his estimate of R180 for the cost of manufacturing a ton of hessians in Dundee from a well-managed Dundee mill, and he placed the average Calcutta cost at R120. That figure represented "cost in the mill;" it did not include jute, or outside charges. Personally he had manufactured hessians in Calcutta at from R90 to 95. His estimate for Calcutta of R120 did not include depreciation, but he objected to his figure being raised. Calcutta could more than hold its own even with a ten hours' day. He did not think that the jute operatives had suffered in health, because they adapted themselves to the long hours, and went to their country for periods of rest. With a ten hours' day he felt convinced they would get a great deal more local labour. The Bengali would not come at 5 A.M., and at present they started with the second shift. The early hours kept out the local men. It was only in the weaving department that extra time was added in the morning and at night. He thought that the weavers took long holidays because their work was too exhausting. The spinners did not go away so much, because they had not the means, and because their hours were not so long. In the early days of the industry the production was low because they had not the experienced weavers that they now had. The electric light was introduced in 1900, and the rate of production hour for hour was about the same now as before. They expected a production of 240 yards a day from each weaver for the fifteen hours that the loom was working. He could not say what the theoretical maximum outturn would be, but in the course of the 15 hours the weavers would lose quite two hours. Up to 1892 they worked by one shift, and it was in that year that the double-shift system was introduced. He was very much in favour of that system, and was the first to start it on the river, as he was convinced that the children were very much overworked. Prior to that all the half-timers worked the whole day. So far as he was aware there had never been a midday stoppage in Calcutta. Even during the old one-shift days the engine ran from day light to dark. It was possible that by the double shift proprietors hoped to obtain a larger production. He favoured one stoppage during the day, from 11 A.M. to 1 P.M. This arrangement would give no trouble. There should also be a half-holiday on Saturdays, as in his opinion the European staff required more time for recreation. The European assistants had no "light-money" until 1900, and they would gladly sacrifice the "light-money" for shorter hours. Witness disapproved of the present system of working both on account of the European staff and the Indian operatives. He considered that six o'clock was quite early enough for any one to start working in the morning. Those people who worked up to 8 P.M. were always on the second shift, which commenced at 9 A.M. A few of the weavers who were on the premises all day had to go a long distance to their homes, but the up-country men usually resided in the vicinity of the mill. He anticipated no strike in consequence of a reduction of hours. Some years ago the workers struck, and demanded that work should start at 6 A.M. instead of 5 A.M. The strict enforcement of the law in regard to half-timers would inconvenience them to a great extent. He estimated that 20 *per cent.* of the children were under nine years, and 20 *per cent.* of the adult spinners were under fourteen years. The suggestion that a child should obtain a certificate before employment was impracticable with the present shift system, but it could be done with a ten hours' day. With the present shift system it would not work, no matter what facilities were given by Government for certifying. He could not suggest any way of enforcing the law relating to children, without adopting a ten hours' day. He thought that the hands would be more attentive with a ten hours' day and the mills could also obtain local labour then.

Witness No. 171.

Mr. Walter Lamond, manager of the Lawrence Jute Mills, Calcutta.

Mr. Walter Lamo
Written evidence.

I represent the Lawrence Jute Co., Limited, as manager of their mill at Chackassi, while Messrs. Bird & Co. are the Managing Agents for the same. My experience in India extends over a period of seventeen years, during which I have been engineer, assistant manager and manager consecutively, while for the past four years I have served the above Agents as manager of the Dalhousie and the Lawrence Jute Mills. The number of workers employed in this mill is—men 2,374, women 107, children 608, or a total of 3,089 hands. As the Lawrence is quite a new mill, having started work on the 15th of April 1907, I can only state that during the said year it worked for 205 days, while the average number of running hours was 13·2 a day. I am not in favour of limiting the working hours of adult males, nor to my knowledge has the physique of workers been affected by the existing hours in jute mills. The Factory Act at home sets no restriction on the working hours of adult males, and I see no reason for limiting the hours in this country. Such a course of action would compel mill-owners to keep a special staff of workmen for night duty, in case of a break-down with engine, shafting, gearing or machinery, and surely such would be unreasonable. Regarding the question whether physique has not been affected by long hours, I would point out that although at present jute mills having electric light work from 5 A.M. to 8 P.M. daily, it seems quite a mistake to say that the workers have long hours, because with the shift system now in force, the preparing and spinning hands are only understood to work nine and ten hours a day, but since as a rule all the doors in a mill are open during working hours, while the workers are free to run in and out when they choose, the hours actually worked are still less. In the weaving department there is no shift system so-called, but here again the workers are not engaged for more than twelve hours daily, as they invariably take a full three hours for meals and rest, during which interval their machines are kept running for them, either by their neighbours, or by daily hands especially engaged for the purpose. In some cases these daily hands are engaged and paid by the mill-owners, the piece workers getting the full benefit of the extra work thus produced, while in the mills I represent the piece workers are paid higher rates to provide for their engaging daily hands to keep their looms going while they are out. I would also point out that in the majority of mills a large proportion of weavers are up-country men, who generally go home on holidays for two or three months every year. As already stated, I am not in favour of restricting working hours, but if the hours must be limited I should advocate a working day of thirteen hours from 6 A.M. to 7 P.M., which with the present shift system would give workers an eight to nine hours' day, so that it would not be necessary to stop the engine between noon and 2 P.M. Should a thirteen-hour day still be considered too long, I would propose 6 A.M. to 6 P.M. or a twelve-hour day, with the present shift system, and no stoppage at noon, as the workers' hours would thus not be more than eight a day. I am not aware that there has been any physical deterioration of workers between the ages of twelve and fourteen who may have inadvertently been employed as adults, therefore I see no necessity for the creation by law of a special class of workers intermediate between the half-timer and adult, to come under the name of "young persons." Although under the home Act such a class has been created, who work under restricted hours, I see no occasion for adopting this course in such a country as India, where the development of young persons is so much more rapid than at home. In this country young persons of fourteen years are practically full grown.

Even if desirable I am afraid it would be extremely difficult to keep a special register of all workers under the age of sixteen, as compulsory registration of births has not yet been enforced in this country, while it is almost impossible to accurately tell the ages of young persons between twelve and fourteen. I see no occasion for restricting the working hours of women employed in jute mills on the shift system, more so as the majority of these live in houses in the mill compound. I do not approve of raising the age limit for children beyond nine, as their work is very light indeed, while they are only engaged six hours a day; again, the work they do is necessarily intermittent, thus allowing the children to practically play about at least one-third of the time, so that it cannot be any hardship to them. The children are thus better employed in a jute mill, where ventilation and light are all that could be desired, than making mischief or lying up at home, where in the majority of cases the existing conditions are anything but favourable to good health. While certificates of age may be required as at present, I am afraid that any strict regulations as regards physical fitness would be detrimental to the interests of both employers and children, while to require such certificates before the commencement of work seems altogether unreasonable, if not impracticable. It is not to the interest of mill-owners to engage workers who are physically unfit. Again, children are naturally irregular attenders at work, so that new children are being recruited almost daily, more especially during the hot weather. Such being the position, unless children, as also mill machinery are to remain idle, a medical inspector would have to attend at the mill daily. This I am afraid would be impracticable. As all mill managers and their European overseers take good care not to engage young persons who are physically unfit for the work required of them, I see no occasion for requiring such certificates from workers who have hitherto been half-timers, before being allowed to work full time as adults. Half-time children are always employed in regular sets in jute mills, so that no law need be prescribed for these mills. I do not think that factory owners should be obliged to provide elementary education for children working in their mills. This, I am afraid, would be considered quite a hardship both by parents and children, while I think it would be difficult to make the latter attend if schools were provided for them. Then again I am not so sure that an elementary education would benefit the jute mill worker, much less the mill-owner, as we already have a class of this sort in the mills whom we find it most difficult to get on with, since they generally hold false notions regarding their abilities, and will on no account do work which they choose to consider beneath them. I think it would be a mistake to do anything which might tend towards increasing the numbers of such a class in jute mills. I think it quite unnecessary to make a rule prohibiting non-working young children from accompanying workers to dangerous or unhealthy parts in jute

Mr. Walter Lamond. mills. Managers do all they can to prevent women bringing children into the mill, as they generally take up the mother's attention and thus interfere with her work. But in some cases the mother may have no one at home with whom she can leave her child, while she might be its only support, so that it would be extremely hard on both if she could not find work on the child's account. These remarks apply to the hand-sewing and hemming departments, where there is no dangerous machinery, while the existing conditions are much more healthy than in the child's home. Children under age are not allowed within the mill proper. I do not think it at all necessary to raise the standard of latrine accommodation to one seat for every twenty-five workers; the present arrangement of providing one seat for fifty seems ample. I am not sure that separate urinal accommodation need be insisted upon. Such has been provided in this mill, but we find it extremely difficult to make workers take advantage of urinals. As a rule all doors in a jute mill are hung so as to open readily from the inside, while practically all are kept open during working hours, so that no law need be prescribed for such mills. As all dangerous machines in jute mills are well fenced, I don't see that further precautions are necessary, more so since the present Act provides the factory inspector with full powers to order further fencing should he deem it necessary. My experience is confined to jute mills situated on the bank of the Hooghly, so that I am not in a position to say whether there should be uniformity in the administration of the Factory Act throughout India, but the conditions of work seem so different in the various localities that I presume a uniform Factory Act would prove unsuitable. Then again with only one or two exceptions modern jute mills are all nicely situated within large compounds on the banks of the river, are all built on the shed principle, having only the ground floor, while light and ventilation are practically perfect, so that in my opinion it would be but right to treat such mills as a class by themselves. Full-time medical inspectors will not be necessary unless certificates for children are called for prior to employment. Such a staff might be appointed as would ensure each mill getting a monthly visit from the inspector. I am sorry I cannot give statistics showing the effect of the varying lengths of the working day on production, wastage, and economical working. If certificates of age and fitness are required before engaging half-time children, I certainly think it will be necessary to prescribe some time limit within which the child can work pending the next visit of the medical inspector. As already suggested, arrangements might be made whereby the medical inspector could visit each mill once a month, while children who may be employed during the interval could be brought before him and examined for certificates on his next visit to the mill. Should it be prescribed by law that no half-timer shall be allowed to work as an adult before being passed as physically fit by the inspector, I fear it would be extremely difficult to ensure such a law being carried out. As stated elsewhere, it is not to the interest of mill managers to engage young persons who are physically unfit for the work required of them, so that this matter might well be left to the care of the mill manager and his European assistants, who may safely be trusted not to take a doubtful advantage if this item be left out of the Factory Act. If a medical inspector should not pass a half-timer who wished to work as an adult, said worker would no doubt run about from mill to mill until he eventually passed muster, and secured work as an adult, while possibly if rejected by one inspector he might be passed by another. Against this sort of thing I can think of no safeguard. As already pointed out, I see no necessity for creating a class of "young persons" as in the United Kingdom. If however such a class be created, and their daily hours of labour be restricted to ten, while mills continue working a fifteen-hour day on the present shift system, these young persons might still be employed as full-timers in the preparing and spinning departments, where the adults work no more than these hours, but such could not be employed as piece workers in weaving departments where adults work practically a twelve-hour day. Double shifts of "young persons" could also be arranged as with half-timers, but it would depend very much upon the wages this class would receive, as also the proportion of "young persons" created, as to whether it might not be more economical to dispense with their services altogether, and thus compel them to either seek work as children or remain idle. The proportion of workers in this mill is —women 3·5 *per cent.*, half-timers 20 *per cent.*, and "young persons" 14 5 *per cent.*, so that in our case if the hours of women and young persons be reduced, and since they only amount to 18 *per cent.* of the whole, we might prefer to dispense with their services altogether, instead of allowing them to determine the length of our working day. I would advocate no change whatever in the present working hours of jute mills, but if a reduction of working hours is decided upon for adult labour, I presume it would be preferable to fix a maximum number of hours, leaving it to the discretion of the mill-owners to settle the time for the commencement and termination of the day's work. This I advocate because while times might be good in the jute industry, and labour in the vicinity of the mill plentiful, it might be to the interest of that mill to employ double shifts, and thus put in a longer day in preference to a shorter one with the three shifts as at present, while the latter system might be again adopted when times are not so good. I think it would be quite a mistake to bring home-trained factory inspectors out to India, as I fear that should such a course be adopted it might lead to considerable friction. If changes must be made in the Factory Act by all means let us have such carried out both gradually and quietly, under the inspection of men of undoubted tact and ability, who thoroughly understand the language, and are well acquainted with the conditions of Indian life and industries. Men from home cannot answer this description until they have had some years' training in this country, possibly as assistants under well-tried inspectors of long experience in Indian life and work. Should a more stringent Factory Act be adopted, let us have the change carried out gradually and quietly, otherwise should a big step be attempted all at once it might probably upset, if not disorganize, the whole of the industry as represented by the jute mills. Even now a few of the mills are short handed, while during the coming hot season all will be more or less short of labour, so that should the age limit for children be increased, or a class of "young persons" be created, it would be well to see that such a change is not carried out before next rainy season, say about August, when mill workers are more plentiful. All mill-owners know that labour is by no means too plentiful, more especially during the hot season, while again the number of jute mills has increased and still continues increasing out of all proportion to the labour required for them. Such being the present position, mill-owners are all quite alive to the fact that if they wish to keep the required labour they must necessarily provide good houses in the compound for a certain proportion of their workers. Understanding this no law is necessary regarding the houses for workers.

Witness stated that he formerly managed the Dalhousie mill and was now managing the Lawrence mill, which had been newly erected. They worked from 5 A.M. to 8 P.M., and took no extra time at either end. They also stopped at 6 P.M. on Saturdays (the preparing and spinning departments at 4 and 5 P.M.) for cleaning up, while only a small proportion of the hands came in on the Sunday to finish up the cleaning. An early Saturday afternoon stoppage was popular with the men. Those who came a long distance from their homes to the mill usually slept during the week in the coolie lines, and so the early Saturday afternoon stoppage enabled them to go home for the week end. It took some weavers an hour to reach the mill, and for those men the day lasted from 4 A.M. to 9 P.M. The weavers' hours were certainly long, but if they were reduced it would affect the whole working of the mill. The weavers, too, preferred the long hours in order to get extra pay. He always found that he could get a plentiful supply of labour in the old daylight working days. His experience was that the men preferred electric light for the sake of the extra wages, and they had never asked him to reduce the working day. They could not go back to the short day and reduced wages now, because in the meantime the price of food had gone up 100 *per cent.*, while they had also become more luxurious in their habits. Most of his hands were local men, but the up-country men all took a long holiday each year. The weavers were supposed to be at their looms for 12 hours a day. As the Lawrence mill was a new mill, while 11 porter hessians were new to the weavers in the district, they had not yet got a satisfactory outturn of hessian cloth from the weavers; they obtained a production of 175 yards *per* loom *per* day as compared with 230 yards in the Dalhousie mill. This latter was at 145 picks a minute. The looms might be working for 15 hours a day, but the weavers would not be present all that time. Four weavers were required to provide one extra hand, and each contributed ten annas a week for this man. The mill did not engage or pay this extra hand. That was the custom in their district, and a higher rate of wage was paid to the four mill weavers as compensation. A bonus was paid on the outturn above 15 cuts a week on some of the sacking cloth, and 11 cuts on the hessians. The majority of the sacking weavers earned the bonus, but this was not always the case in the hessian department. There was no fixed standard of work, but if the mill thought they could improve on a man they would engage another weaver in his place if possible. There was a system of *dasturi* among the *sirdars* and weavers, and it might also be in force as regards the employment of children, but only to a small extent. The European overseers could not stop it, although they do all they can to prevent it.

Mr. Walter Lam
Oral evidence.

The electric light was introduced to increase production. He thought that, in the 12 hours' day, the production *per* hour was greater than it was now. He also considered that the weaver worked harder in a shorter day, when he knew that his earning period was not so long. A 12 hours' day also slightly reduced the cost of production *per* ton, but against this the total output was also reduced and the total output determined the profit on capital. If the working day were reduced to ten or twelve hours, more mills would have to be erected as he could not foresee the day when operatives would so apply themselves as to turn out in twelve hours the present production obtained in fifteen hours. There certainly was an improvement going on, but it was very slow. It was a hardship to bring women and children to the mill at 5 A.M. In some cases they did not leave until 8 P.M. This was the case with some children whose fathers were weavers and who lived some distance from the mill. If a "young person" class were created, it might be possible to work them during the morning and afternoon, with the half-timers' shifts. They employed 20 shifters on a set of frames, and of this number three or four were always away for half an hour at a time. This was arranged among themselves through the shift *sirdar* and there was no set time table. If ample facilities were provided for the inspection of children, he saw no objection to their being certified before being employed. They had never had a medical officer at their mill since it was started nine months ago. Their children had never been medically inspected. He would be quite willing to have the present Act in regard to children enforced. He estimated that ten *per cent.* of the children were under nine years of age. The European overseers always saw the children before they were employed, and so to a certain extent the European overseers were responsible for this illegality. He thought it very difficult, however, for an European to tell the age of an Indian child correctly. If the proposed class of "young persons" were allowed to work for twelve hours, it would not affect the industry. They had no weaver in charge of a loom under 20 years of age, though some of the daily weavers might be under 20. They had 400 looms. The hands in the mill were chiefly Bengali Hindus, but the up-country Mahomedan was a better and stronger man. He did not think that any man could work 15 hours at a stretch. There was no fixed custom concerning the four weavers and the extra hand. It paid the four weavers to engage an adult hand who produced double the value of the wages that he earned. In the hessian looms they could get very few daily weavers, and so the four mill weavers had to arrange amongst themselves. When one man was absent the remaining three were required to attend to the four looms. The new staff of inspectors must be men possessed of tact, a little mechanical knowledge, experience of Indian customs, and a knowledge of the language. He thought that they should be recruited in India, and they might be sent home for special training, if this were considered advisable. The mill employed no physically unfit children, but the enforcement of the law in this respect must be gradual. He estimated that ten *per cent.* of the full-time shifter boys on the spinning and roving frames were under 14 years. Non-working children were only allowed to accompany their parents in the sewing and hemming departments, where there was no machinery. Within one month of the starting of the mill they had a full complement of hands. To a certain extent that meant that they drew labour from other mills. They did not send out recruiters.

Witness No. 172.

Messrs. Duncan Brothers & Co., Agents, the Anglo-India Jute Mills Co., Ld.

We are agents of the Anglo-India Jute Mills Co., Ld., which have two mills at Kankinara. The "lower" mill (now 500 looms) was started in 1897 and employs 2,162 men, 595 women, and 338 child-

Messrs. Duncan Brothers.
Written evidence.

Messrs. Duncan Brothers.

dren. The "upper" mill (now 560 looms) was started in 1905, and employs 2,000 men, 531 women, and 470 children. At both mills the hours worked are from daylight to dark, as there is no electric light installation. The working day therefore varies from fourteen hours twenty minutes in June to eleven hours fifty minutes in December. From 15th October to 25th February the hours of working are twelve and a half hours, or under, and for the remainder of the year of about 197 days the working day is from twelve and a half hours to fourteen hours twenty minutes. The daily average working is thirteen hours. During the year 1906, from January to June, our mills closed at 2 o'clock on Saturdays, in accordance with an agreement made with the members of the Indian Jute Mills Association, and for 1906 the daily average was twelve hours twenty minutes. It has been suggested that the latrine accommodation should be increased to one seat for every twenty-five workers. This standard may perhaps be desirable if the suggestion refers to ordinary latrines. In nearly all jute mills, however, there are septic tank installations, and it has been found from experience that in such cases one seat for every fifty workers is quite sufficient. We have no objection to providing separate urinal accommodation if this is deemed necessary. We do not consider that certificates of physical fitness are necessary. Certificates of age are required under the present Act, but the system of registration of births has not been so fully carried out as to give a secure basis for this certificate. In the absence of a system of compulsory education, we are of opinion that children who are physically fit may with advantage to themselves be employed, and that for jute mills in Bengal the age limit of nine years is, if anything, too high. The advantages of work are twofold—(1) physically, in that when wage-earning children are more likely to be well fed and their development thereby promoted, and (2) morally, in that while working they are less likely to fall into the bad habits engendered by idleness. In present circumstances undue restriction on the employment of children may have the effect of deterring adults, who cannot afford to remain at home to look after their children, from seeking employment in industrial concerns. It would also without doubt cause serious discontent amongst the workers if their children, able and willing to work, were debarred from doing so by stringent regulations imposed in opposition to their own wishes. When the age limit for employment of children was raised to nine years, it was in many cases a hardship, and with the periods of dear food stuff experienced during recent years it would be a further hardship to hamper children in earning something towards the family exchequer. Our opinion on this point is expressed in view of the fact that to the best of our knowledge and belief the work in which children are engaged in jute mills in Bengal is not hard, nor such as is likely to retard physical development. The suggestion that no half-timer should be permitted to work as an adult unless certified as over fourteen years of age, and physically fit, if rigorously carried out, would, we think, stop a considerable part of the machinery in every jute mill in India. It is these workers who are most required in the spinning department, which swarms with young persons, and demands an extravagant number because of the shift system worked in all jute mills. We do not think the suggestion could be applied in practice without bringing about a most serious shortage in the labour required to keep mills running. We disapprove of the suggestion to create a class of "young persons" of the age of fourteen to sixteen years, if this involves restricting the hours of labour of such. Many are married at this age, and have families to support. We are of opinion that the proportion of women, half-timers, and "young persons" in jute mills is so large that they would determine the hours during which the machinery economically runs. These workers are employed in the preparing and spinning departments, and if the yarn production is limited the hours of working the weaving department must also be limited, which would cause dissatisfaction to piece workers. We think the hours of adult labour should be restricted within reasonable bounds, but are not in favour of limiting the period to twelve hours. It is admitted in the report of the Textile Factories Labour Committee that the habits of Indian workers are such that even were a limit of twelve hours fixed, they would not work during all this period. They stop at intervals, and it is impossible without serious friction to alter their habits in this respect. The proposal to allow work from 5 A.M. to 8 P.M. in factories working on the day-shift system seems to us to be impracticable, if the hours of adults are limited to twelve hours a day. This would necessitate the weavers working in shifts which, as they are piece workers, is not feasible. If, as is stated in the report above named, adult operatives object strongly to work by electric light, they have, we believe, no objection to work from daylight to dark. As will be seen from the particulars given above, this period averages thirteen hours a day throughout the year. The conditions for workers in jute mills are, we consider, much more healthy and natural than those prevailing in other industries, as described in the report of the Textile Factories Labour Committee. Their surroundings are sanitary, and with an average day of thirteen hours there is no overwork to lower the physique of the workers. This company, in common with many others, has built lines of *pucca* rooms for the workers, each room costing from R200 to R250, has erected septic tanks on sites convenient to these, has made available a supply of filtered water in ample quantity from hydrants placed adjacent to the lines, and has seen that the lines of houses have *pucca* drains, which are regularly flushed and kept under proper supervision. When these circumstances are considered, it is evident that the physical conditions under which jute mill operatives work and live are exceptionally good, and greatly in advance of those under which they would be in most municipalities, where the sanitary standard is, we believe, lower than in the areas controlled by the jute mills. There is not therefore, we consider, any need for drastic legislation so far as jute mills are concerned. We do not approve of the suggestion to appoint inspectors from the United Kingdom. It should be quite possible to obtain suitable inspectors in India, and it is, we think, of more importance that such inspectors should have an intimate knowledge of Indian conditions than that they should be thoroughly acquainted with the conditions in other countries. If the Factory Act is to be made more stringent than that at present in force, we think provision should be made whereby discrimination in its terms can be made in favour of industries that are at present conducted on generally satisfactory lines. With reference to the suggestion that elementary teachers to be paid by mill-owners should be appointed for the instruction of half-time children, we strongly disapprove of this. Education should be a State concern, and not one for private enterprise. Until an Act is passed making it compulsory for children to attend school, we fear that little progress is

possible. As an experiment, schools were started by some mills, but our own experience in this direction has been that the movement was a failure as the children would not attend. Messrs. Duncan Brothers.

** NOTE.—Messrs. Duncan Brothers & Co. did not send a representative to be orally examined.

WITNESS No. 173.

Mr. B. Foley, I.C.S.

Mr. Foley. *Written evidence.*

There is no need to limit the working hours in the factories in Bengal. They are already short enough, and no complaint can be made against the Bengal factories in this respect on humanitarian grounds. I am not qualified to state whether the working hours should be limited in other Provinces, never having visited any factories in those Provinces. Similarly I am unable to state whether the physique of workers in those Provinces has been affected by long hours. Any legislation on the subject, therefore, will not affect Bengal. It can only be a question whether the Bengal working hours should be introduced in other Provinces. I note what I found these to be, when on special duty in 1905.

Jute Mills.—Most have electric light, and the hours are from 5 A.M. to 8 P.M., with three shifts, each of which gets three hours off, so that no one works more than ten hours. In three mills I found no electric light, the hours being daylight to dark, dark being taken at 7 P.M. in one mill, and 6-30 P.M. in the other two in the hot weather. One of these worked with three shifts, and the other two with four shifts, the hands getting three hours off, *plus* two and a half hours for light refreshments.

Cotton Mills.—One mill worked from 8 A.M. to 6 P.M. with one shift, and half an hour off in the middle of the day; a second from 5-30 A.M. to 6-45 P.M. with four shifts, each of which got four and a half hours off; a third 5-30 A.M. to 8-30 P.M. with three shifts, work past 6 P.M. counting as overtime; a fourth 5-30 A.M. to 8 P.M. with one shift, but the mill stopped between 11-30 and 1-30; a fifth 5-30 A.M. to 8 P.M. with four shifts, each working eleven hours with two and a half hours off; a sixth 5 A.M. to 8 P.M. with three shifts; a seventh 7-30 A.M. to 7-30 P.M. with one shift, but each man was allowed three hours off; an eighth 6 A.M. to 8 P.M. with two shifts, each man working twelve hours with two hours off. In the other factories which I visited the hours were still shorter. In paper mills the machinery is kept running day and night, and there are two shifts, one working from 6 A.M. to 6 P.M. and one 6 P.M. to 6 A.M., each with two hours off. The work is, however, extremely light. Other details are perhaps unnecessary. I understand that in Upper India the usual hours are thirteen, with one shift and only half an hour's interval in the middle of the day. Besides this, discipline is strictly observed in Upper India, and there is a careful system of checks whereby absence without leave during working hours is restricted. In Bengal everywhere discipline is extremely lax, and the hands are allowed to come and go inside a factory more or less as they please. They are in many instances paid by the piece, so they lose money by not working while the mill is open. I found one manager of a cotton mill who told me he had previously had charge of mills in Bombay and Agra. The hands were worked harder in Bombay than in Calcutta, and harder at Agra than in Bombay. At Agra the hours were 6 A.M. to 9 P.M. with one shift and only half an hour off; the same hours were kept on Saturday, and on Sundays the hands had to attend and clean machinery till 11 or 12 in the morning. There would be an immediate strike in his Calcutta mill if the Agra hours were introduced. It is clear that no legislation is required to limit the hours of work in the Bengal factories. I found several managers of jute mills in favour of reducing the working hours to ten, with one shift, the mill being closed for an interval in the middle of the day. This recommendation was made also by the inspector of factories, Bengal. In favour of it, it is urged that though the output would be reduced, supervision would be better, waste would be avoided, the wear and tear of machinery would be less, and more work in the time should be obtained from the operatives. This, however, could hardly be enforced by legislation, unless it was required for humanitarian reasons. Such reasons cannot be alleged in the case of the factories in Bengal, where the operatives do not work excessively long hours. The only persons who work for excessive hours are the European managers and their assistants, but I presume these are adequately compensated by their salaries and commissions. Any proposal to enforce a working day of ten hours only in the factories of Upper India and Bombay would, I suppose, be regarded as preposterous. As to the question what the hours in these factories should be, I am not qualified to express an opinion. I do not think that the minimum age at which children are allowed to work in factories should be raised beyond nine. As far as I have seen, the work required from children is very light, and they seem, especially in jute mills, to look upon it more or less as play. I do not think there is any harm in a child of nine doing the work that I have seen them do. Since however the Factory Act enacts that no child under nine shall be employed in a factory, it is necessary that this provision of the law should be enforced. At present in Bengal there is, I think, very little to prevent a manager from employing children under nine if he wants to. I think that certificates of both age and physical fitness before children are allowed to work in factories would be advisable, in order to enforce the existing law that children under nine should not be employed. Care must be taken, I think,—

(1) that the certifying medical officer is a responsible person, who will not grant certificates without due care. It is easy enough at the present time to obtain medical certificates from certain classes of medical officers, certifying anything the applicant wants. The certifying officer must therefore be of the Civil Surgeon class, and must have plenty of time at his disposal to give to the subject; this the ordinary Civil Surgeon has not;

(2) that the certifying medical officer exercises considerable discretion. The work required from children in mills does not require physical strength, and even a sickly child might be considerably better off working in a clean mill than if left unlooked after in an insanitary *busti*.

Mr Foley.

With these precautions, however, it will of course be extremely difficult to prevent one child being substituted for another, so that a child that is under age or not fit can get into a factory on a certificate granted to another. I would also require certificates before children who have worked half time are allowed to work full time as adults, for the same reason as for children, *viz.*, to enforce the law that children under fourteen should not be allowed to work more than seven hours. At the present time I can only remember one factory where I noticed this was neglected, the manager apparently not knowing what the law was, but my colleague Mr. Fremantle has noted that in Upper India "in some mills and factories the provisions of the Factory Act limiting the employment of children to seven hours are habitually disregarded." The case is probably the same in Bengal. Child labour (*e.g.*, that of "shifters" in a jute mill) is absolutely essential for the working of a factory, and I found that in the hot weather, when the annual shortage of labour occurred, there was more shortage of this than of any other kind of labour. Since, therefore, there is practically no fear of detection, and he can do so with perfect impunity, the manager must have every temptation in the hot weather both to employ children under nine years of age, and to employ as adults children under fourteen years of age. This must also be frequently done without the manager's knowledge. Whether it is harmful or not to the children I am not qualified to say. I merely note that the law on the subject is not enforced under present circumstances. I would recommend certificates merely as one means of enforcing the law. The same precautions must be taken as in granting certificates to young children. I should say that there was no need to aim at uniformity inthe administration of the Fac tory Act throughout India. The object to be aimed at I should say is that the Factory Act should contain as few rules as possible, but that these rules should be rigidly enforced. The conditions of various parts of India are very different, and a provision (*e.g.*, as to the hours of labour) which would be accepted as natural in Bengal might be looked on as absurd elsewhere. Power might be left to the Local Government to pass rules to prevent any special abuse. I think the present inspecting staff is inadequate, and should be strengthened. For a large number of the subjects connected with the working of a factory, some medical or sanitary knowledge is necessary; medical inspectors would therefore be very useful on the inspecting staff. If certificates of age, as proposed, are required, they should be given by these medical inspectors. The work of inspecting factories and granting certificates should then be taken away from Civil Surgeons. Civil Surgeons have no time for these duties, and a medical officer of the standing of a commissioned officer is required. A native assistant medical officer cannot be trusted to grant the certificates required, even though the certificates are subsequently countersigned by the Civil Surgeon.

Oral evidence.

Witness stated that in 1905 he was placed on special duty by the Government of Bengal to enquire into the causes affecting the supply of labour, and the scarcity of labour said to be prevailing in the jute and other industries in Bengal. He attributed the fact that the workers took a long holiday in the hot weather to the fact that they earned good wages, and so could afford to return to their homes. He did not consider that the operatives took these holidays because they were exhausted by their work. He had come to the conclusion that, so far as Bengal was concerned, the working hours required no alteration. He should not like to express any opinion about the hours of the weavers; but he understood that the weavers were on piece work, that they were allowed opportunities for rest, and that there was competition for the looms. This might mean that only the strong men could last out the working hours; but even if the hours were restricted he doubted whether the Bengalis would return to weaving. He was informed that the up-countryman was a more careful worker. He was not prepared to say that the hours of the weavers were so long as to be injurious to health. Bengali weavers were to be found in some mills, and their absence from other mills was due more to inefficiency than to their inability to stand the hours. The twelve hours' day was introduced after he had written his report. The scarcity of labour at that time was in the spinning and other departments, and he considered that the high wages that the weavers earned secured for the mills a large supply of weavers. He came to the conclusion that jute mill labour was extremely popular owing to the weekly payment system, the high wages earned, and the laxity of discipline in comparison with the conditions obtaining in up-country factories. He could only account for the different methods adopted in the jute and cotton mills by the assumption that the shift system was absolutely necessary in the former by reason of the character of the work, and that it was not necessary in the latter. He saw no necessity for interfering with the hours of adult labour. In his opinion the native liked to take his own time over what he had to do. Shorter hours would involve stricter discipline. The age at which children could be employed was fixed by law, and he considered that the medical officer should only be permitted to exercise his discretion in regard to physical fitness. Witness saw a large number of children whom he believed to be under nine years of age at work in the jute mills. Owing to the Provinces of India being so different in so many respects there was no need for, and some disadvantage in, an uniform Factory Act throughout India. If the provisions of the existing law were carried out in Bengal, that would probably be equivalent to the introduction of a new Act. He could not give any definite opinion as to whether the early morning start in the cold weather was a serious hardship to the children. He received no complaints from the operatives about the length of their hours, and he was told by managers in one or two cases that their mills had been obliged to introduce the electric light in order to satisfy the hands, who complained that the operatives in electric light mills were earning more money. He knew nothing about other Provinces and so was not in a position to say whether a restriction of hours was necessary elsewhere. Witness was told by some managers that if the scarcity of labour was to be prevented the working day would have to be restricted to ten hours. In a restricted day the earnings of the operatives would be smaller, and it might be that they would not then go away so frequently. The ordinary population of most Bengal districts was too well off to supply unskilled labour for factories; *e.g.*, in Burdwan the ordinary coolie came from up-country. He found no excessive sums spent on drink by either the jute or cotton workers. The up-country men came to

Calcutta to earn large wages and save money. Often one member only of the family came to Calcutta to work, and he sent his savings home, *e.g.*, this was largely the case in Gaya. If they wanted money they came to work in the mills. This, however, largely depended upon the state of their crops. He would not insist upon the owners of factories providing schools; should education for half-timers be made compulsory, it would not drive away the workers. Witness did not admit that there was a great scarcity of labour. In his opinion the jute industry had developed so rapidly that the demand had outstripped, but only just outstripped, the supply. He did not think that the length of the working day kept the local labour away from the mills. Bengal by itself was quite unable to meet the demand, even if the people were not too well off to require employment in the mills. Mr. Foley.

Witness No. 174.

Mr. Charles Hutchison, manager of the Union Jute Mills, Calcutta.

I represent the Union Jute Co., Ld., as manager of their mill at Sealdah, Messrs. Bird & Co. being managing agents. The numbers employed are men 2,482, women 385, children 376=total 3,243. The electric light was put into this mill in August 1901; previous to that period the average daily number of hours worked was 12¾; since then the average is 15. If the medical inspector was in duty bound to attend either weekly or fortnightly, and to certify all newly employed children, I think the requirements as regards the certification of half-timers would be entirely met. I do not consider the examination of half-timers, prior to their being allowed to work as full-timers, necessary, nor do I see how it could very well be applied in practice without considerable friction and trouble. Besides, no manager or supervisor would allow boys physically unfit to do full-time work, if for no other reason than their being unable to do the part assigned them, and consequently making or running good material into waste. I am not in favour of the creation of a class of young persons, and if the law were amended so as to create such a class, I fear it would disorganize the labour very much, and bring forth bitter complaints from the only class it was intended to benefit. The number of workers between the ages of 14 and 16 in this mill is about 420, and 70 *per cent.* of that number are in one department. The imposition of definite time limits of work will, I consider, be most satisfactory to all concerned. Employers, managers, supervisors, employés, factory inspectors, etc., would then know exactly what was expected of them. The special circumstance about the jute industry is the shift system, and its suitability to the work and the workers. I would therefore suggest that if legislation be found necessary it should be so modelled that this system of work could still be adhered to. Factory inspectors from home would be at a considerable disadvantage for some time with the language, people, working conditions, etc. I do not approve of the suggestion to bring out such men from home, but would suggest that inspectors should be selected from men who have been several years in the country, and are experienced in the working conditions of factories here. If alterations are to be made in the law, and greater stringency enforced, these alterations must be made with due regard to the customs and feelings, likings and aspirations, of the workers, and ample time must be allowed for effecting the change. The housing of factory hands must rest chiefly with factory owners, according to local conditions, and it is so largely of interest to the owner to have good houses, water, and sanitation, that special legislation on this head I consider is not called for, unless perhaps a greater regard to sanitary matters could be enforced. If the hours of the factories are to be changed, I would suggest that an early stoppage on Saturday be considered, and, if possible, included in the change. Engines to stop not later than 3 P.M., so that all cleaning and repairing might almost entirely be done on the Saturday afternoon, and thereby ensure for almost every one one off day in seven. I consider this would also help to bring about a steadier attendance during the week. Limiting the hours of adult males I do not deem necessary, as occasions arise when extra work cannot be avoided, and spells of extra work I have never known to be objected to, neither are they harmful to the male adult. But limiting the factory hours could I think be advantageously done, and as a result a steadier attendance of the workers all the year round might be expected. The physique of the workers has not in my opinion been affected by the long hours, nor do I consider it likely to be affected from this cause, as, if they feel tired out, or sick, they immediately take some time off, or go to their own home for a month or two. The factory hours might be thirteen hours for five days, and nine hours for Saturday (that is—the engine to run these hours). The restriction would I think best be enforced by order of the Bengal Legislative Council. The shift system should be adhered to. After full consideration, I do not see that a half hour stoppage at midday would be of much benefit to any one. In factories working on the day-shift system, the legal working hours should be from 6 A.M. to 7 P.M. I approve of a thirteen hours' day, which would give the weavers who do not work in shifts from ten to eleven hours a day, allowing time for food, prayers, bathing, etc. I do not consider the creation of a "young person" class at all necessary, nor have I noted any physical deterioration that could be attributed to the illegal employment as adults of children between 12 and 14 years. I do not consider a special register for workers under the age of sixteen necessary; to keep an accurate register of such would be very difficult, and would, if possible, be evaded by the workers themselves. The employment of women at night after or beyond the legal working hours should be prohibited. The age limit for children should not be altered. At nine they are fit for light work, and are better employed in the healthy surroundings of the mill than running idle in the too often insanitary hovels in the bazaars. Certificates of age and physical fitness should be required for them either when employed, or shortly after. I do not consider a second examination necessary before they work as full-timers. I see no necessity to prescribe sets by law for children; but, as far as jute mills are concerned, they are almost entirely employed in sets. I do not see how owners could be expected to provide elementary education for these half-timers, or how this could be arranged. In districts where there are several factories, the children keep changing from one to another. A rule should be made prohibiting children from accompanying their parents to dangerous or unhealthy parts of factories. The children should either be left at

Mr. Hutchison. *Written evidence.*

r. Hutchison

home, or some place or room, as a nursery, with a woman to take charge, should be provided. In jute mills, where all parts are healthy and fencing carefully attended to, no such prohibition is required. In none of the factories I have had the privilege of seeing in India do I deem the fixation of a standard of purity for air necessary, all being airy and well ventilated. In jute factories no standard of moisture is necessary. The water in use at the mills is settled and clean water; no Government fixed standard is required. I consider one seat for every forty-five to fifty users sufficient; separate urinal accommodation is necessary, but there is no objection to its being adjacent to the latrine. It would be advantageous to have all doors so arranged that they opened readily from the inside in case of fire, but most doors in mills open outwards. Sliding doors are sometimes fitted in the wider doorways. No further precautions as regards fencing are required, seeing that the factory inspector is empowered to have any fencing done he considers necessary. Uniformity in administration should be secured, as far as possible, while keeping the different conditions of the various industries fully in view; also the local conditions. More frequent visits by the medical officer, under the present arrangement, would, I consider, quite meet the case, and special medical inspectors are not required.

al evidence.

Witness approved of legislation restricting the working day to thirteen consecutive hours. This would not affect the industry adversely. He considered that the working of a mill was more economical in the pre-electric light days than now. The workers also were more steady in the old days. His mill kept to the hours of 5 A.M. and 8 P.M., and during the 15 hours he estimated that a weaver was at his loom for about ten to eleven hours. If the mill could get 240 yards production *per* day *per* weaver, they were satisfied. He thought the production in the old daylight working was about 210 to 220 yards a day. A reduction in the working hours would not seriously affect the production, and he was convinced that with a shorter day the hands would apply themselves more steadily. Witness also approved of a Saturday afternoon stoppage. A mill in which he was formerly employed once tried the experiment of cleaning up on Saturday afternoons, but was forced to abandon it by competition, as nobody else followed their example. He approved of the hours of women and children being restricted, but was opposed to limiting adult male labour. Overtime was occasionally necessary, and sometimes a little extra work had to be performed in the finishing and other departments. Restricting the hours during which the engine could run would not interfere with the hours which each individual adult could work if required. They always gave the Sunday holiday, and about ten native holidays in addition, in the course of the year. A small percentage of men came in on Sundays for repairing, etc., and received a day's wages if they worked up to 12 o'clock. He did not think that a fixed twelve hours' day would affect the industry seriously. When matters had adjusted themselves the men would work better. It would take a little time, and in the interval the Companies' interests would suffer to some extent. The present long hours necessitated the men taking frequent holidays, and consequently mills had to employ more hands than were required for the actual working of the mill. With a shorter day, there would also be a decrease in the cost of production. He employed a few Bengalis as weavers. They were just as good as the up-country men in skill, but did not apply themselves so well. He was of opinion that his views as to the restriction of working hours coincided with those of the owners of the mill. He thought that a thirteen hours' day would fit in with the present shift system—which was certainly the system best suited to the labour—and would also bring the production nearer to that of the present day than a twelve hours' day would. Mills would not ultimately lose with a thirteen hours' day, as the cost of production would be less. The present hours had resulted in an increase in the cost of production by over 3 *per cent.*, and the waste had increased by 2 *per cent.*

Witness No. 175.

Messrs. Ralli Brothers, Calcutta.

Messrs. Ralli & others.

Written evidence.

We are owners of Ralli Brothers' Jute Press, Calcutta, and Ralli Brothers' Jute Press, Naraingunge. The labour employed in a jute press can be divided into three classes:—

(*a*) the importing and exporting labour,

(*b*) the pressing labour,

(*c*) the assorting labour,

and as far as the jute presses under our control are concerned these three classes can be respectively described as follows:—

(1) The importing and exporting labour consists exclusively of adult males, who must be physically strong. Their work is almost always in the open. They are paid either by piece work or by daily wages, but in neither case, unless very exceptionally for, say, an hour or so, do they have a working day longer than 11 or 12 hours in all, in the course of which they get all the leisure for meals and rest that they require.

(2) The pressing labour also consists exclusively of adult males, who must also be physically strong. They work indoors, but in godowns where the handling of jute is confined to what must necessarily be done at the presses, and in which the accumulation of dust is therefore less than in the assorting godowns. These men work at very high pressure in shifts of 2, 3, or 4 hours each, the total working hours rarely exceeding 8.

(3) The assorting labour is composed of adult male *khatadars*, with only a very small percentage of women and children working under them. Even although it is generally only the lighter work of undoing bundles and cutting knots that is entrusted to them, women and children are considered unreliable for assorting work, and the tendency has been for their numbers to fall off year by year. All assorting work is paid for by the piece, and no restrictions are placed upon the assorters as to

their time of coming and going, or of rest in between. As assorting can only be done by good light the working day is necessarily limited to considerably less than the hours of daylight. The above survey gives the reason for our replies to the following points upon which evidence is required by the Commission: It does not appear necessary that the working hours of adult males should be limited, as the conditions of all classes of work in a jute press provide, so to say, automatically for any limitation of working hours that may be required. The hours are not such as to affect the physique of the workers, and sickness does not at any time of the year appear to be frequent amongst them. We have, in view of what we write in the preceding paragraph, nothing to say in reply to the question as to what hours should be fixed, and what would be the best method of enforcing the restriction. We only wish to point out with reference to the suggestion that the engine be stopped for half an hour each day that stoppage of the engine in a jute press does not imply stopping the importing, exporting, and assorting work; and that, on the other hand, the engine and presses may be working whilst importing, exporting, and assorting are at a standstill. We have no knowledge of any systematic employment as adults of persons under age, and can therefore say nothing as to the creation of a special class of "young persons" whose working hours should be restricted, nor as to the desirability of keeping a special register for all workers under sixteen. Even if it were found possible to enact that no person was to be employed in a jute press without an official certificate as to his fitness, we do not see how it would be possible to prevent these certificates from passing from hand to hand. So very little work is done at night in jute presses that it is immaterial whether women be prohibited from working there or not. The questions of the minimum age for children, and of certificates of age and physical fitness for them, appear of little moment to jute press houses, in view of the small number of children employed there, and more particularly of the fact that such children as there are generally work with their parents. Jute press owners ought not to be obliged to provide elementary education for children working in their presses. The number of children working is small, and their attendance is irregular and optional. It is not practicable to prohibit even working young children from accompanying workers—generally their parents—to other parts of factories. In press houses there are no unhealthy parts, and the presses alone are at all dangerous, but at them work is too brisk for children to be readily able to come near. Proper ventilation might be insisted upon. In a jute press house no water is used for humidifying purposes. The proposal to raise the standard of latrine accommodation and to provide separate urinals has reference, presumably, to the latrine accommodation at coolie lines. A much lower standard should suffice for jute presses where coolies only come to work for the day. It might be prescribed that all doors of working rooms be so hung as to provide ready exit in case of fire, details in each case depending upon the general plan of the premises. No precautions for fencing machinery appear necessary in jute presses. We cannot say whether it would be advisable for the Factory Act to be uniformly administered throughout India. We are unable to give an opinion as to whether full-time medical inspectors of factories should be appointed to assist the present inspectors in securing the due observance of the Act, but it is essential that any regulations finally issued should be impartially enforced with equal strength in all cases.

Messrs. Ralli Brothers.

Witness, who represented the firm in respect of their jute pressing business, stated that occasionally work went on until 9 P.M., but never beyond that hour, as after 9 P.M. the insurance rates were prohibitive. Pressing labourers did not work beyond 8 hours in all, although the working day might sometimes be as long as 15 hours; assorting labourers worked as they liked over a day not extending beyond twelve hours; importing and exporting labourers sometimes had a day longer than 12 hours, but with considerable intervals of rest, as the work was not continuous. Few children were employed, and those only in assortment. Accidents were very few, and generally not due to machinery: the latest case he recollected was that of a bale falling and killing an adult. If it were found necessary to introduce a twelve hours' day, he had no objection *in so far as assorting labour only is concerned*, as assorting labour can only work by good day light. Any Factory Act should be administered uniformly for any one industry. Witness pointed out, with reference to proposals regarding the education of children, that, as the pressing season only lasted for a few months, it was not desirable or practicable to start schools in connection with jute presses. The number of children working in presses was, moreover, very small.

Mr. Calvocoresses representing Messrs Ralli Brothers. *Oral evidence.*

Witness No. 176.

Kazi Zahir-ud-din Ahmad, Kankinara.

I am president of an association composed solely of mill operatives, which came into existence in 1895, and is doing its utmost to popularize mill work amongst the masses of the population in general and Musalmans in particular. The opinions that I put underneath are due to my life-long experience, and besides I consulted a good number of representative Hindu and Musalman workers, and it is chiefly from their arguments that these lines are penned. For reasons better not be mentioned here I refrain to give their names, indeed I have pledged myself not to give them. With regard to the number of working hours in a week, I fully condemn night work as it is indulged in at present. It is totally unsuited to the health of a native especially to the womenfolk and children. To make them come inside a mill before 4 A.M. and leave it at 9 P.M. in winter time is to practise sheer cruelty on them. The mill-owners themselves are the most humane of mankind, they abhor cruelty the same as any civilized people, but how have they allowed it so long is a wonder, most certainly it has not been pointed out to them with any force before or perhaps when money is at the bottom, the best philanthropic class of men forget their duty to mankind. What should be the proper working hours for a day, and what should be for the week? I condemn the shift system for adult workers. It does not pay the mills. It fattens the *babus* and *sirdars* at the cost of both

Kazi Zahir-ud-din Ahmad. *Written evidence.*

Kazi Zahir-ud-din Ahmad.

the workers and the mills. In shift system all the shifts do not and cannot turn up in time with the result that the men, women and children are made to work overtime. When say 2 hours' overtime is wrought six hours are put in the book, two for the *babus*, two for the *sirdar*, and two for the worker for actual work. The mill has to pay for all these. A few exceptions are intentionally made. To ward off suspicion the *babu* generally puts less overtime than what has been worked against some workers. These take their complaints finally up to the manager when it is generally concluded that the *babu* is very strict in giving extra time, whereas he and the *sirdar* are hoarding money, constructing houses, and purchasing properties. Let there be only one shift for the day and let the engine work, say, 10½ hours daily from Monday to Friday, and let there be 7½ hours work on Saturday, altogether 60 hours for the week. Two hours off towards the middle of the day on all days except Saturday and one hour off out of 7½ hours on Saturday at a convenient time. Supposing the engine stops at 2-30 P.M. on Saturday the remaining hours of the day can be utilized in cleaning the machinery and the mill gate should remain totally shut up on Sunday. No worker is to be allowed inside a mill on that day, not even on the pretext of cleaning the machines. On short days after giving 2 hours' stoppage there will not be 10½ hours daylight, but this shortcoming can be easily made up on long days, without difficulty an average 60 hours week can be had for all the year round. It will be successfully contended here that at present in mill running from daylight to dark, no one works more than nine hours on an average daily, short and long days put together. Now I am advocating 10½ hours in the place of nine, jumping as if from the frying pan to the fire. This nine hours can be extended to eleven, and sometimes to twelve on long days, by having to work overtime, whereas exact 10½ hours will leave no such loophole, but this excess 1½ hours is to be added to the daily wages of the workers. That the natives of India (except Punjabis, Rajputs, Gurkhas, and Pathans) are constitutionally weaker than the Europeans is well known. That the present system of working hours is not suitable to their health can be proved by statistics. In every mill municipality the death-rate is higher than the birth-rate. Compare the death-rate of an equally healthy rural village in Bengal where there is a population that does not work in the mill. It will open the eyes of everyone that contends that the present system of working is not detrimental to the health of the native workers. It has been sometimes erroneously argued that the percentage of the female population is low in the mill localities But this is not the case. An up-country man who comes to work in the mill comes with a wife, one or two unmarried or widowed sisters, and cousins. As his income increases he takes another wife or mistress and gets his sisters and cousins married. The widow is generally married to a man (as *nicka* wife, as is well known in criminal courts) who has already another wife. A census of a few mill municipalities, if taken at present, will no doubt prove that for every 4 men we have 5 women. Hence the birth-rate ought to be by far greater in comparison instead of far too low. The sanitation of a mill municipality is also superior and it should in the ordinary circumstances produce still better results. I think I need not prove that the Indian mothers are very prolific. Every successive census puts this glaringly before the naked eyes, but why this sterility in case of those mothers that are mill workers. The night and overwork brings sickness which leads sometimes to death and in those cases that do not end fatally invariably will produce barrenness. I have asked many thoughtful men to refute my conclusions, none has been put forward, perhaps none exists.

The one single shift, with the working hours *per* week shortened, will produce a set of steady workers and minimize the chances of robbing indulged in by *babus* and *sirdars* by putting false attendance and wrong timing. Every one a machine will make the worker to look after it more carefully, and the result will be that the machinery will be better kept and a better day's work will be produced. As for piece work such as weavers there will be no more than 10½ hours work per day; we will get superior weaving and less wastage. A tired weaver cannot but be false to his work. The chances will be lesser when he will have to work less number of hours *per* day. With 10½ hours work daily European assistants can be inside the work all the time the engine is running which will be of the greatest advantage. There will be a check on false timing and wrong attendance. As at present the European assistant has to leave the work under the supervision of his *babu* and *sirdar*. Instead of looking after the workers, they watch well their common master's movements, they keep look-outs who warn them when their master has left his room to return to the work. The wireless telegraphy was well known to the Indian workers long before the great Italian discovered it in Europe. Through a system more perfect than the recent discovery native labourers know when their master is sleeping, when he is in the bath-room, and when in the dining-room. In short when he is back inside the mill he finds that his *babu*, *sirdars*, and the workers at their respective duties, and gets highly pleased and receives a laugh at his back from his workers. Another great advantage by adopting suggested working hours will be that it will bring a better supply of workers. Those ones that do not join now, on account of having to work at night or too early in the morning, and on account of their dislike to work overtime, will come forward with enthusiasm in large numbers. I will give a concrete example. Any one who has taken a cursory view of the class of the labour of a mill will notice that almost all of them are *Beharis* and United Provinces people. He will be struck at the paucity of the real Bengali workers. Why is it so? The Bengalis are constitutionally weaker and are not fit for long hours as well as night work, hence they avoid the mills. When there will be no chance of night and too early morning works nor overtime there is every reason to believe there will be a great influx of Bengali workers. I am almost certain about it. It may be argued that 60 hours *per* week will raise the cost of production. It will no doubt slightly. But the strict supervision under European assistants will make up a good deal and that is sure to bring more workers; the loss hitherto used to be incurred by standing of the machineries, and also by one man having to look after two machines, will be a thing of the past. The advantages will be so great that it will be ultimately found that the cost of production has not gone up by an appreciable degree. I submit all the jute mills must work the same number of hours *per* week and the same number of days for the year. If the short working hours and days are decided upon let the experienced mill managers be consulted from what time they are to come into effect. Let it be two or three or five years from hence. Let every one be prepared for it. An abrupt change might bring some tem-

porary trouble. Let all the mills simultaneously start with short time if they are to take it up, otherwise some will derive an advantage over others which will only end in disorders. Kazi Zahir-ud-din Ahmad.

Witness stated that the association was composed of mill operatives. It was started in 1895 with the object of attracting more Mahomedans to jute mills, but since then Hindus had been admitted to membership, and now the association looked after the interests of the operatives generally. He himself was a clerk in a mill. They did not keep a list of members, but their membership numbered some thousands. Neither had they a fixed place of assembly. One Sunday in December about one thousand operatives assembled to discuss questions in connection with the present enquiry. All were agreed as to the necessity for more holidays. The Mahomedans wanted two days each for the *Id ul Fitr, Bakri Id,* and *Mohurrum;* and the Hindus wanted a week for the *Durga Puja.* The meeting also approved of daylight working, the weavers stating that with shorter hours they would make up their earnings to the same amount by more constant application to their work. At present the hours were so long that they were obliged to take frequent rests. In his opinion the daylight working mills were never short of weavers; if it is ever the case that weavers leave non-electric light mills for electric-light mills, then there must be some other reason apart from that of wages and hours. The weavers could not work a complete month with the fifteen-hour day. The majority of those present at the meeting preferred enjoying better health to earning big wages, but some wanted shorter hours with an increased rate of pay. Some of the spinners advocated a ten-hour day, 6 A.M. to 6 P.M., with a two hours' stoppage at midday, and a Saturday half-holiday. In his opinion the fifteen-hour day had an adverse effect upon the health of the workers, and there was a larger attendance at the dispensaries of the long-hour mills than there was at those of the short-hour mills. They had a president, vice-president, treasurer and honorary secretary of the association. The cash balance at present would be under R100. Their last expenditure was incurred on the improvement of a mosque, and before that they disbursed alms on the occasion of the Coronation. The association raised subscriptions for purposes of charity, and assisted in cases of sickness, or if an operative had to be sent home. There was a difference of opinion as to the proper length of the working day. Many of the strong up-country men did not like night work, but others had no objection to it. Witness thought that shorter hours would help the labour supply. The operatives were compelled to tip the *sirdar* or *babu* before obtaining employment. The weavers paid from R2 to R8. A shifter boy had to give up one week's wages. In the preparing room R2 were paid, and in the machine sewing from R2 to R4. In the hand sewing the "admission fee" rose to R2, and then the head *sirdar* took from each hand one to two annas a week. The *sirdar* and *babu* worked together. The *babu* sometimes received half the money, and sometimes a quarter, this depending upon his influence over the *sirdar.* When there was a shortage of labour the *sirdar* allowed hands to come in without any "admission fee," but directly labour became plentiful those operatives had to pay him *dasturi* or forfeit their appointment. The head *sirdar* received about R30 from the mill, and made at least R100 a month in *dasturi.* It was perfectly true that the *sirdars* made the hands leave in order to change them about, and allow new hands to come in that gave them more money. The *babu* also changed the names on the pay sheets, and put down wages to non-working men. He could not say whether the money so obtained ever went so far as the Europeans. It was impossible for the hands to stop this custom. He knew of one man who refused to pay, and was in consequence hunted down by the *sirdars* and prevented from obtaining employment. *Sirdars* were members of the association. Directly an operative became a *sirdar* he continued this system of *dasturi.* A *babu* sometimes reduced and sometimes increased the actual amount shown as the work done by a piece-worker, and took the difference on pay day. Suppose a weaver had woven 10 cuts; his work would be put down at 8 cuts, and 2 cuts would be added to the account of a friendly weaver, the money for this being taken by the *babu* and *sirdar.* Sometimes cuts are simply added to the account of a weaver—an accomplice—and the money taken from him on pay day. Mills in which the exactions of the *babu* and *sirdar* are kept down always command the most plentiful supply of labour. If a weaver paid *dasturi* nothing was said if he idled about; but if he refused to pay then the overseer was told directly he left his loom idle. He considered that the local men were prevented, by the length of the hours, from entering more largely into mill employment. The present early start was trying to the children. His family originally came from Agra, and had settled in Bengal. A large number of up-country men remained in Bengal. It was not his experience that the weavers left non-electric light mills for electric-light mills. The hands took their holiday in the hot weather because they could not stand the hard work and long hours at that time of the year. *Oral evidence.*

WITNESS No. 177.

Messrs. Barry & Co., Secretaries and Agents, the Gourepore Company, Limited, Calcutta.

We are the Secretaries and Agents of the Gourepore Company, Limited, subject to the control and supervision of a Board of Directors. The Company has two mills situated at Naihatti, on the left bank of the Hooghly, about thirty miles distant from Calcutta up the river. No. 1 mill of 415 looms provides employment for 1,837 men, 456 women, and 660 children, No. 2 mill of 840 looms provides employment for 3,125 men, 652 women, and 958 children. The mills not being equipped with an electric light installation, the hours of work are restricted from daylight to dark, and consequently vary with the seasons of the year; the approximate length of working day being thirteen hours in the hot weather months, and eleven and three-quarter hours in the cold weather. On Saturdays the mills shut down at 5 P.M. The average number of days *per* year of over twelve and a half hours is 156. The average working day throughout the year is twelve and a half hours. We are emphatically opposed to the limitation of the hours of adult labour. Work is not continuous, and the group of labour working the longest hours is a migratory class who return to their country Messrs. Barry & C *Written evidence.*

Messrs. Barry & Co. for periods varying from one to three months annually. It has also to be borne in mind that Sundays are observed by jute mills, which are then closed down. There is absolutely no evidence of the deterioration of the average physique of operatives. The conditions on which they work, on the other hand, attract labour, and as a test of the preference for longer hours implying better returns, weavers elect to go to electric light mills in preference to mills more conveniently situated to their dwellings. The shift system on which jute mills are worked does not warrant any legal enactment. It is entirely optional for the labour, and no coercion governs the situation. The physical condition of children and young persons employed in jute mills coming under our direct observation is to our mind sufficiently convincing that there is no necessity whatever for any additional legislation restricting the working hours of this class of labour. A large number of women employed in the mills being young mothers, it would certainly appear humane to forbid their working at night. The system of medical inspection in force provides all the safeguards that are needed. The abuse of child labour would alone justify any fresh provisions. Children are employed in jute mills in regular batches, with intervals of rest of considerable duration, and the necessity for interference does not present itself. We do not consider that mill-owners should establish and maintain schools for the education of children of operatives employed. The parents would resent this as an interference prejudicing the aggregate family income, and trouble would result. We are not aware that labourers have expressed any desire for the education of their children, and the attendance at a school on the company's premises, and aided by the company, does not encourage the idea that education is appreciated. Young children accompanying their mothers are probably far better tended and in better surroundings than if left behind. Our experience does not suggest that any special additional precautions are called for. The sewage purification scheme at these mills is on the aërobic system, with no septic tank. The latrine provides one seat for fifty workers, which has been found ample. The urinals are separate from the latrine, but the water is led into the ærobic contact beds. The system was designed by Mr. Dibdin, of London, and full details are in the hands of the sanitary commissioner. Jute mills have all exits open (opening either outwards or in the form of sliding doors) during working hours, and these are sufficient in number. Beyond laying down the number of openings there should be, we do not think any further action is called for. Fencing is under the immediate observation of the factory inspector, and all reasonable recommendations for additional precautions are complied with. This condition disposes of any question of abuse of child labour and denotes that the existing inspection arrangements suffice If the inspecting staff be strengthened so as to ensure more regular inspection at shorter intervals, the protection it is desired to extend to children would be as effective as it need be. Uniformity in administration throughout India, with conditions so widely varying, would, we consider, present great difficulties and hardships. Legislation should be so framed as to suit different industrial centres, if not individual industries. The authorities controlling provisions should exercise reasonable elasticity. The existing staff, if numerically strengthened to permit of inspections at more regular intervals, would, in our opinion, meet all that is needed The best production is taken off in the longest day, probably because labour is generally more plentiful at that time of the year. The better the production the less the wastage, and here again it is a question of sufficient labour or otherwise. A striking feature of the jute industry is the cheery spirits and agility of the children employed. To require certificates of physical fitness prior to employment of half-timers would seriously cripple the working of a mill. All that can be said is that every child should be examined at the first medical inspection after his or her employment in the works. This is done here to the best of our ability. No certificate of physical fitness should be required before employing half-timers as full-timers. This class of worker is almost entirely employed in the spinning department, and until the children reach a certain stature and development they are not able to work as spinners, which is the work they are put on to at first as full-timers. This work is not heavy, as the younger spinners are always kept to the easiest spinning yarns, and three of them are employed where two bigger boys would be. We are not in favour of the creation of a class of "young persons." The proportion of women and half-timers in the mill department represents a very large percentage of the total labour employed, and the suggested restrictions would generally dislocate the running of machinery. If put in practice the effect may be to divert labour and cripple the industry. We do not think there should be any restriction whatever limiting the hours of labour The industry has already to contend against scarcity of labour, and any legislation affecting the earnings of labour would be disastrous. We consider jute mill operatives enjoy exceptional advantages provided by and at the expense of mill-owners, and do not need any special legislation. We do not favour the importation of inspectors from the United Kingdom, who would be at a disadvantage, not being conversant with customs and habits of labour in this country. It would be far more satisfactory to strengthen the existing staff by local selection. Jute mill labour is generally contented. It is not contended that investigations have disclosed any abuses or hardships, and it does not occur to us that any fresh legislation is called for. Interference with labour is invariably attended with friction leading to trouble, and as relations between jute mill-owners and labour are on a satisfactory basis, the introduction of changes is to be deprecated. Jute mill labour as regards housing accommodation, sanitary arrangements, water-supply, and markets for securing their daily wants, are better cared for than any other class of operatives. The investigations of the Commission might with advantage be extended to enquiry as to restrictions that might with advantage be placed on the licensing of liquor shops in the neighbourhood of jute mills.

NOTE.—The firm will be represented by a representative to be examined orally.

WITNESS No. 178.

Messrs. Jardine Skinner & Co., Calcutta, Managing Agents of the Kamarhatty Co., Ld., and the Kanknarrah Co., Ld.

Messrs. Jardine Skinner & Co. *Written evidence.*

The mills under the management are the Kamarhatty Co., Ld., and the Kanknarrah Co., Ld.

Messrs. Jardine Skinner & Co.

There are employed—

	Men.	Women.	Children.
At Kamarhatty	4,481	1,042	992=6,515 hands.
At Kanknarrah	8,968	1,126	1,547=11,641 „
		Grand Total	18,156 hands.

These factories, during the past ten years, have worked for 305½ days in each year for fourteen hours ten minutes a day. The average daily number of hours for each year has been as follows :—

1898	15	hours.
1899	15	„
1900	14·50	„
1901	14·50	„
1902	14	„
1903	15	„
1904	15	„
1905	15	„
1906	15	„
1907	15	„

The working hours of adult males should not be limited, and the physique of the workers has not been affected by long hours. There is neither any necessity nor desirability for the limitation of the ordinary working hours, and that the physique of the workers has not been adversely affected is evident to any one who has had much to do with them. The only persons who may be said to work long hours are the weavers, who are paid by piece-work; but these men, it must be remembered, are mostly imported from the up-country districts, and it is the custom with them to take long terms of leave during the hot weather months, so that they may visit their villages and their homes. Even in their cases, therefore, the so-termed long hours are compensated by correspondingly long periods of leave and rest, and total abstention from work. The point must not be lost sight of that the native workers have ingrained habits of leaving their work at odd and uncertain intervals throughout the nominal working hours unlike workers at home, and no efforts hitherto made to compel them to curtail these practices have been successful. Further, it has to be noted that the workers take frequent and prolonged holidays, and in the hot weather months it is no uncommon event for whole bodies of them to migrate for 3 to 4 months at a time. As to the working hours, we are averse from *any* limitation being imposed, and we say to the Commission—"leave well alone. Do not come in and disturb a condition of things satisfactory alike to the employer and to the employé, and bear in mind that any restrictions that may be imposed may inflict the greatest hardships on the workers themselves, who at present, and under existing conditions, are perfectly healthy, highly paid, and well contented with their lot." Our mills are already worked on the shift system, therefore any stoppage of the engine between 12 noon and 2 P.M. is unnecessary. As already stated, we are opposed to any restriction of the working hours, and we are not in favour of legalising the starting and the stopping time. The weavers alone work as long as 12 hours, and, on an average, these men do not work more than 8 to 9 months in the year. Should, however, the Commission decide that, as a matter of public policy, the hours of work *must* be limited, we consider industrial interests would best be considered by prescribing *a 10-hour day or a 60-hour week*, and, if the choice is to be between a 12-hour and a 10-hour day, we unhesitatingly declare for the latter, although, be it remembered, we are averse to any curtailment whatever. If the Commission decide on a 10-hour day, we suggest that—

(1) the working hours should be fixed by law from 6 A.M. to 6 P.M.

(2) the engine should be stopped from 11 A.M. to 1 P.M.

If a 60-hour week be adopted, we suggest—

(1) On *Mondays, Tuesdays, Wednesdays, Thursdays, and Fridays* the working hours should be from 6 A.M. to 6-30 P.M. thus—

start at 6 A.M. and work to 11 A.M.

stop from 11 A.M. to 1 P.M.

re-start at 1 P.M. and work to 6-30 P.M.

On Saturdays—

start at 6 A.M. and work to 10-30 A.M.

stop from 10-30 A.M. to 11-30 A.M.

re-start at 11-30 A.M. and work to 2-30 P.M.

Our reason for advocating a 10-hour in preference to a 12-hour day, if we are not to be allowed a 15-hour day, is to do away with the necessity for a double shift. With the 2-hour break the labourers would have ample time for food and rest, and *one set of hands* would be able to work all day on two

Messrs. Jardine Skinner & Co.

shifts; with only a half-hour break it would be next to impossible to get the workers back to time, and besides that it would necessitate two sets of hands. We do not believe, and will not admit, that, as the result of the alleged illegal employment of persons between 12 and 14, there has been any physical deterioration requiring the creation by law of a special class of workers intermediate between the "half-timer" and the "adult" and corresponding to "young persons" under the English Act, and we do not consider that the working hours should be restricted. Our mills are built on the shed system, and the air space everywhere is ample, and the conditions generally conducive to the maintenance of health. We invite the members of the Commission to visit our works and to satisfy themselves on these and other points. We do not consider it necessary to maintain a special register for all workers under the age of 16, in order to facilitate enquiries as to the physical fitness of the youngest adults to work full time; and our reasons for not thinking it necessary are because of the care and precautions that are taken at the mills to make certain that young adults are physically fit before being employed. We think that the employment of women at night, that is, after 8 P.M., should undoubtedly be prohibited. The minimum age at which children are allowed to work in factories should not be raised beyond nine years. The work that the children in the mills perform is light; and they are not, as a matter of fact, actually employed more than seven hours a day, and then they have a break between. In many instances they are the children of parents who come down to the mill from the up-country districts; and, except in very exceptional cases, they are undoubtedly much better off when allowed to work in the mill than they would be if left in their own homes, the surroundings in every way being so much better. Certificates of both age and physical fitness should not be required *before* children are allowed to work in factories. It would be quite unworkable in practice that such certificates should be demanded *before* the commencement of the employment, and the introduction of any such system could only result in the greatest inconvenience and loss to mills by causing machinery to stand idle; and, at the same time, very real hardships would be caused to the workers themselves by preventing their working and earning wages. These remarks apply with even greater cogency to the requirement of certificates in the case of adults. It should not be prescribed by law that children should not be employed except in regular sets, whether morning and afternoon sets or double sets; all children are at present employed in regular double sets. Factory owners should not be obliged to provide elementary education at their own expense for children working in their factories. If the education of the masses of the country is desired, the cost should be defrayed out of Imperial funds—there does not seem any valid reason why the mills should be called upon to bear it. It is possible that it would be in the best interests of the State to provide education, but we doubt if the time is ripe for it, although sooner or later we suppose it must come. It is an undoubted fact that, from the workers' point of view, education is *not* wanted. The parents' one aim is to get their children into a wage-earning position as soon as possible, and they would likely oppose the youngsters having to attend the schools. No rule could well be made prohibiting non-working young children from accompanying workers to factories, without involving very great hardships on their parents. No prohibition could be enforced except by establishing a hard-and-fast rule that no non-working child should be allowed inside the mill compound, and to insist on this would entail that mothers, who are compelled to earn their living, would be obliged to leave their babies at home, in, probably, no one's care. No case of an accident having occurred to a non-working child taken into the mills by its parents has ever come to our knowledge. No objection is offered to an attempt being made, by testing samples of air taken from factories, to prescribe an analytical standard of purity for air in factories, with a view to secure proper ventilation, at the same time, it is pointed out that this is really quite unnecessary, as our mills are particularly well ventilated and comparatively free from dust. Nor is any objection offered to a similar attempt being made to prescribe a standard of moisture for the air in factories, with reference both to manufacturing processes and to the health of the workers. No humidifying system is in vogue, so that it is not necessary that a standard of purity be fixed for the water to be used for humidifying purposes. The standard of latrine accommodation should not be raised to one seat for every twenty-five workers, as it is found that, with the most modern up-to-date septic tank arrangements, such as are installed at our mills, one seat for every fifty workers is ample. No objection would be taken to a clause requiring the provision of separate urinal accommodation. It should not be prescribed that all doors of working rooms should be hung so as to open readily from the inside outwards in case of fire, and the reason is that the mills have been to very considerable expense in installing automatic sliding doors of Mather and Platt's special pattern, with a view to protection in case of fire, and any change at this stage would bring the mills in conflict with the fire insurance companies. All windows at present open outwards, and the necessity for legislation under this head scarcely exists. No further precautions for fencing machinery are necessary in jute factories, as all dangerous parts of machinery are already carefully fenced, and any suggestions made by the factory inspector from time to time are readily given effect to. No arrangements could be made to secure uniformity in the Factory Act throughout India, without inflicting grave injustice on particular trades and industries, so widely different are the conditions that prevail in different directions. Any legislation that may be introduced should apply to the whole of any one Province, and also to the whole of any one trade in different Provinces, but not to different trades throughout the country. Full-time medical inspectors of factories should not be appointed to assist the present inspectors in securing the due observance of the Act. We are not able to provide the Commission with statistics showing the effect of working days of varying length (*a*) on the production *per* spindle of fine yarn, (*b*) on waste, and (*c*) on the economical working of a factory, but outturn mainly depends on the supply of labour, ndependent of the number of hours worked. When labour is plentiful and to spare, the production *per* spindle or loom *per* hour is good, for effort is stimulated, but when labour is scarce and there is no fear of the labour being turned out to make room for others, the off-take immediately becomes less. The percentage of waste, both in the spinning and weaving departments, varies but little as between a long and a short day. It is when labour is scarce that the wastage increases. If certificates of fitness, as well as of age, be required prior to the employment of children on half-time, it will, in our opinion, be necessary to prescribe some reasonable time limit within which the

employé shall be allowed to work pending examination for a certificate. That reasonable time-limit should be regulated by the visits of the inspecting medical officers. No physically unfit children are employed in the mills and all requirements would be fully met if the inspecting officers visited the mills once a month. It would be a great hardship, both to the mills and to the children, if mills were to be compelled to wait for a certificate of age and fitness before being allowed to employ children as half-timers. No half-timers are permitted to work as adults until they are of full age under the Act, and the greatest possible care is taken in every case that they are physically fit before being employed as full-time workers. We are not in favour of the suggestion under point (*c*) referred to the Commission, *viz.*, the creation of a class of "young persons" as in the United Kingdom. Under existing conditions, and the present shift system, persons over 14 years of age are regarded as adults; and, if the present working hours were restricted, it would interfere with the running time of the engines as now obtaining. The proportion of women, half-timers, and young persons of 14 to 16 is so large in the batching, preparing, spinning and winding departments that it may be taken as certain that any amendment of the law so as to restrict their hours of employment would mean that mills could not run continuously from daylight to 8 P.M., and the hours fixed for those particular classes of workers would in fact determine the hours during which the machinery could run. The probable number of young persons employed is approximately one-fourth of the whole, in the sections named. Very few young persons are employed in the weaving and calendering departments. If the hours are to be limited, we strongly urge that definite time limits should be prescribed, within which only the employment of operatives would be legal, and, assuming that it is eventually decided to restrict the hours of adult labour, the restriction should take the form of the imposition of definite time-limits beyond which no operative could be legally employed. In no case, and under no circumstances, should a maximum number of hours be fixed, leaving it to the discretion of each individual employer to settle the time for the commencement and the termination of the day's work. We are very decidedly of opinion that the special circumstances of the jute industry in which we are interested, working as it does on the shift system as against industries working with one shift only as in the case of the Dundee mills, are such as to entitle it to exceptional treatment in respect of the recommendations and suggestions included in the terms of reference to the Commission, and we ask that exceptional treatment be accorded to it. The exception should take the form of no interference with the working hours. We are opposed to inspectors from the United Kingdom being obtained for factory work in India, and we do not consider it necessary that, in any event, all factory inspectors should in future receive a considerable portion of their training in England. On the other hand, we consider it necessary that they should know the language, the country, and particularly the people, thoroughly. The industry here is so large that the opportunities for training inspectors are great. As we view it, this course would be preferable to importing trained men from home as inspectors. The conditions are so entirely different that considerable time must elapse before the home trained inspectors could become conversant with the totally different working conditions prevailing in India. We consider it essential that any law which it may eventually be decided to introduce, if more stringent than that at present in force, should contain provisions introducing a certain amount of elasticity in its actual operation, at any rate for the first five years; any radical changes such as increasing the age-limit of children, or creating a class of young persons, or restricting the hours of labour, would greatly upset the smooth and the efficient, as well as the economical, working of the mills for several years, and may be disorganize the whole industry, in which so many millions of rupees have been sunk. The only suggestions that we have to make as to the housing of factory hands is to insist on filtered water being supplied. It is doubtful if *pucca* brick houses are any healthier than mud huts, while it is undoubted that, in many cases, the workers prefer to dwell in the mud huts. In conclusion, we would state that in our opinion the provisions of the present Factory Act, if properly given effect to, are more than sufficient to safeguard all interests in the mills, and all that is necessary is to see that those provisions are observed. We do not think that any further legislation is necessary; indeed we are of opinion that the introduction of any such legislation could only prove detrimental alike to the interests of the employés and the employer; no real abuses at present exist, and no case for legislation has been made out

Jardine Skinn Co.

NOTE.—The firm did not send a representative to be orally examined.

WITNESS No. 179.

Mr. Marnie, Khardah Jute Mill, Calcutta.

Witness stated that he was batching overseer at the Khardah mill, and had had three years' experience of the jute industry in India. The working hours of the mill were from 5 A.M. to 8 P.M., but the engine usually started at ten minutes to five. The average working day for the spinners was between nine and ten hours; there were no children under fourteen in his department. He himself, and all the European assistants, had to be present when work commenced and concluded, but they had five hours off out of the fifteen; half an hour in the morning, one hour for breakfast, two hours at midday, half an hour in the afternoon, and one hour in the evening. The European staff received extra monthly pay for these long hours. Witness would not say that the working hours of the mill were too long. He thought it better in this country to start early in the morning, and have a long rest in the middle of the day. The Europeans came to India knowing what their duties and hours would be, and personally he did not want his extra money taken away. None of his colleagues would like to lose this extra remuneration. There were seventeen European assistants in the mill; some had been there as long as twelve and ten years, and speaking for them he thought all would like a working day from 6 A.M. to 8 P.M., with the Saturday half-holiday. He would favour altering the hours on account of the present early start, and he did not think this would necessitate an amendment of their agreements. In his opinion the operatives were as alert at 5 A.M. as at any other time of

Mr Marnie. *Oral evidence.*

Mr. Marnie.

the day, and if they came in at six o'clock they would still be half asleep. The European overseers went to bed about 10-0 P.M., and had to get up at 4-30 A.M. He advocated the Saturday half-holiday because he and others felt in need of a little relaxation. If the working day were reduced by one hour the output would suffer to that extent, as he did not believe that the operatives would work better in the shorter day. One English jute worker would do the work of two Indian hands. The machines went at practically the same speed in India as at home. His hands were steady in their attendance, but they did not work at the same pressure or speed as the English operative did.

NOTE.—Mr Marnie was not asked to submit written evidence.

WITNESS No. 180.

Mr. Peter Swan, Calcutta.

Mr. Peter Swan: *Oral evidence.*

Witness stated that he had been connected with the jute industry for 29 years. He had managed mills, and was also connected with the commercial side of the business. His view was that the present shift system was the most economical method of working a jute mill. It gave the maximum return on capital with the minimum amount of trouble to the employé. From the operatives' point of view the present shift system was the best that could be devised. A restricted twelve hours' day would mean a reduction in the producing capacity of the mill. He was opposed to a fixed twelve hours' day. The weavers went where they could earn most money, and the electric light had won the day. Some mills had tried hard to retain the daylight working hours, but had been forced by competition to adopt electric light. Witness approved of the working hours of women and children being limited, but considered that it was handicapping capital unnecessarily to say that a man should not work beyond so many hours. In his opinion the workers could look after their own interests, but he had no objection to protective measures for the benefit of women and children. It would seriously interfere with the industry in Calcutta if adult male labour were interfered with. In Calcutta every mill was a complete unit, and produced a finished article. The fluctuations of the market, and supply and demand, all made it necessary that adult male labour should be free to work overtime. A fixed twelve hours' day would completely upset the working of the mills. Witness attributed the frequent holidays taken by the hands to their increased earnings, and not to bad health consequent on alleged overwork. The Cawnpore men might not take these long holidays because they were working in their own district. In Calcutta the up-country men came from the United Provinces and went home every year. It was the case that the weavers were at the mill at 4-30 A.M. and 8-30 P.M., but they arranged intervals of rest among themselves, and they were a healthy class of men If the children had a long distance to go from their homes, then it was a hardship having to attend at a mill at 5 A M., and from the humanitarian point of view it would be better if the children started later and finished earlier. He approved of legislation preventing children from working before 6 A.M. There would be no hardship if the shifts were so arranged that the children worked their seven hours consecutively. The children would then have 17 hours before coming to work again. Years ago Bengalis were employed in the mills in large numbers. With the expansion of the industry up-country men had come in, and the Bengali seemed to have dropped out.

NOTE —The witness was not asked to submit written evidence

WITNESS No. 181.

Mohd. Zulfaquar Hyder, honorary secretary, Mahomedan Association, Kankinara.

Mohd. Zulfaquar Hyder. *Oral evidence.*

Witness admitted that the weavers left non-electric light mills for electric light mills in the cold weather. They were uneducated; had little regard for their health; and were tempted by the prospect of higher wages. The majority of workers desired shorter hours, but a few who did not take the question of health into consideration desired the long hours. Last Sunday a meeting of 500 Mahomedan and Hindu operatives met near the Hajinagar Bazar. They all came from the new mill at Naihati, and were unanimously in favour of short hours. Witness told them that with short hours their earnings would be less, but they replied that with short hours their health would be better. The rates of the Naihati Jute Mill are 10 *per cent.* higher than those of the Gouripore Mill, and weavers of Gouripore are coming to Naihati mill so as to earn the higher wages. Witness considered that free primary education should be given to the children of the operatives, and that compensation should be given to men injured. In the case of fatal accidents he thought their families should be supported properly by the mill. Back wages should be given to the party concerned, and they should not be forfeited as they are in many mills at present after five weeks.

NOTE —The witness was not asked to submit written evidence He was produced as a witness by Kazi Zahir-ud-din Ahmad

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WITNESS No. 182.

Imaman Imanisher, sirdar in the weaving department, Kankinara Mill, Calcutta.

Imaman Imanisher. *Oral evidence.*

Witness stated that he was a weaver in the Kankinara Jute Mill. He had been there for 26 years, and was now a *sirdar* weaver. The weavers worked at present from 4 A.M. to 8-30 P.M., and the spinners from 4-30 A.M. to 8 P.M. The weavers did not get more than two hours' rest in the day. They did not approve of these long hours, and there was a general opinion in favour of restricting work to daylight hours. They could not go to a mill which worked without electric light, because no looms were available. If the hours were restricted from 6 A.M. to 6 P.M. the men would work better and produce more *per* hour; at present they idled and loitered about a good deal on account

of the trying hours. Before electric light was introduced many of the local Bengali men came to work, but they did not come now on account of the long hours. No workers in the Kankinara mill approved of such long hours; they were unanimously opposed to them. The operatives had absolutely no time at home for their domestic concerns. They got home at about 9 P.M. and did not get to bed till about 11 P.M. Then they had to get up about 3 A.M., prepare their food, wash, and so on, and get to work by 4 A.M. They kept awake during the day by taking snuff frequently. A weaver was required to produce ten cuts a week, or he was dismissed. The operatives wished that some provisions should be inserted in the Act providing for compensation in the event of their being killed or injured in the factory. Imaman Imanish

NOTE.—The witness was not asked to submit written evidence. He was produced as a witness by Kazi Zahir-ud-din Ahmad.

WITNESS No. 183.

Bakarali Imaman, line sirdar, weaving room, Kankinara Mill, Calcutta.

Witness stated that he was a line *sirdar*—the supervisor of one line of looms in the Kankinara mill. He had been in the mill for ten years, starting as a spinner and then becoming a weaver. Their present hours were from 4 A.M. to 8-30 P.M. All the weavers objected to these long hours. They used to earn as much when they only worked by daylight, and they would like to revert to that arrangement. The rates of pay had been reduced of late years from 8½ annas to 7½ annas, and the yardage of the cut increased from 100 to 130. The weavers would work harder if the hours were shorter, but at present everyone worked leisurely, and many fell sick. There were no vacancies in the mills that worked short hours. He was always becoming ill himself from the strain, and had to take leave at intervals. As regards the daily labourers, the managers made them start at 4-30 A.M. in all departments from batching to finishing, though their wages were supposed to be based on a working day from 5 A.M. to 8 P.M. Bakarali Imaman *Oral evidence.*

NOTE.—The witness was not asked to submit written evidence He was produced as a witn ss by Kazi Zahir-ud-din Ahmad.

WITNESS No. 184.

Abdul Razak Tajmahomad, weaver, Kankinara Mill, Calcutta.

Witness stated that he had worked in the mill for ten years, first as a spinner and then as a weaver. Their present hours were from 4 A.M. to 8-30 P.M. They got to bed at 11 P.M. and then had to be up by 3 or 3-30 A.M. They had two intervals during the day of one hour each for meals, and they also went out from time to time to say their prayers. All the weavers wanted a 6 to 6 day. In the old 12-hour day they worked in comparative comfort, but now they had no time to themselves. The rates of pay had also been reduced, and the yardage increased. It was common for a weaver to absent himself as many as four days a month from his work; he would send a substitute on these occasions. There were always some men out of employment, for if a weaver fell ill he lost his place. Many of the weavers were going away from the mills on account of the long hours. Abdul Razak Tajmahomad. *Oral evidence.*

NOTE.—The witness was not asked to submit written evidence. He was produced as a witness by Kazi Zahir-ud-din Ahmad.

WITNESS No. 185.

Mr. George A. Spence, manager of the Titaghur Jute Mills, Calcutta.

I am manager of the Titaghur Jute Factory Company's two mills at Titaghur. The number of hands employed is as under:— Mr. George A. Spence. *Written evidence.*

	Men.		*Women.*		*Children.*		*Total.*
No. 1 Mill ..	3,964		1,061		812		5,837
No. 2 Mill ..	4,596		1,134		832		6,562
Total ..	8,560	Total ..	2,195	Total ..	1,644	Grand Total	12,399

One mill was started on 31st January 1906, and has run 228 days in 1906, and 305 days in 1907, over twelve and a half hours each. The other mill has worked an average of 290½ days annually, over twelve and a half hours each, and the average daily number of hours for each of the last ten years is as follows:—

Year.	*Hours.*	*Year.*	*Hours.*
1898	13·91	1903	14·10
1899	14·03	1904	14·20
1900	13·87	1905	14·52
1901	13·50	1906	13·35
1902	14·25	1907	14·44

The working hours of adult males should not be limited. This is not done in the United Kingdom, and would lead to endless worry and trouble where overtime had to be put in, such as to repair accidents to engines, shafting and gearing, which could only be done when the engines are stopped. It would be quite impossible to foresee this sort of work, and therefore all impossibility to arrange a

Mr. George A. Spence.

fresh staff to do it on short notice. The physique of the workers has in my opinion not deteriorated through working as at present. The class who have the longest hours are weavers, and they go away generally three months in the year to their home up-country, and in any case these operatives do not work more than twelve hours a day. Groups of four weavers whose looms are contiguous work in company, and relieve each other, and in some cases they even employ an extra hand themselves so that they can have their looms kept going steadily while they are absent at meals and the midday rest; and over and above this daily hands are supplied and paid by the mills. I am not in favour of the number of working hours being fixed. Jute mills are worked on the shift system, therefore it is not necessary for the engine to be stopped for half an hour between 12 noon and 2 P.M. I am not in favour of any change being made in the present working hours. All jute mills at present work from daylight to 8 P.M. on the shift system, and time-workers do not work more than ten hours a day, for two hours of which they are paid extra, *viz.* from 6 to 8 P.M. I am not in favour of any interference with the working hours of adult males. If legislation is found to be absolutely necessary, I would favour a twelve hours' working day, between 6 A.M. to 6 P.M., which with the present shift system would not necessitate any midday interval, as no time operatives would work more than eight hours a day. I do not consider that there is any physical deterioration necessitating the creation by law of a special class of workers intermediate between the half-timer and adult. It must be borne in mind that the development of a young person in India is very much more rapid than in the United Kingdom, and an Act applicable to the latter should not be enforced here. Persons of fourteen to sixteen years of age are usually married and rearing families. It is impossible to keep a special register of all young persons under sixteen years of age, as no birth certificates are available in India. Compulsory registration of birth would have to be introduced, and in time it might then be possible to keep such a register. I think it would be quite reasonable to prohibit women from working all night, that is, after 8 P.M., but no jute mills here run all night.

I do not think that the present age limit for children should be raised; a child of nine years old is well able to do the light work required. They only do seven hours' actual work just now, and with a 6 to 6 day their hours would only be six a day. It would be a great hardship to the parents, and besides these children of nine years and over are far better at work than running about doing mischief. The great majority of them would not go to school, even though schools were provided for them, and they are far better working in a well lighted and ventilated mill, even in the hot season, than in their own homes, which are sometimes, where big families obtain, pretty well crowded. I do not think that certificates of both age and physical fitness should be required before children are allowed to work in a mill. Such a law would only tend to create friction, and it is not at all required, as care is taken that all workers are physically fit. I do not think that certificates for both age and physical fitness for young persons just over fourteen are required. It is not to the interest of the mill authorities to employ persons over fourteen who are not physically fit. I do not consider it necessary for it to be prescribed by law that children should not be employed except by regular sets. They are employed by regular sets in jute mills just now, and I do not consider it necessary to make any change. I do not think that mill-owners should be required to provide education for half-time children. If such a provision were made into law, it would be a big step from what at the present moment obtains. It would mean educating a large number of children whose parents never even thought of education, and ultimately creating a low class of people who would find it difficult to obtain employment suitable to what they would consider their abilities; at present there is a large class like this, and nothing will induce some of them to take a lower position in the mill. The ordinary Indian worker in a jute mill is not yet ready for such a step, and there are ample facilities for those who wish to learn in the shape of schools in the villages. No children should be allowed into dangerous parts of a factory; but I see no reason why they should not be kept in the places where there is no machinery, such as the hand sack sewing department, but it is difficult to prevent children going from one place to another. All the same, if any law excluding children under nine from coming into the works were enforced, it would ultimately fall heavily on those workers who would have to keep some one at their homes to look after the children. The workers are generally poor people, and a few youngsters would be left to look after each other, generally all under nine years of age, and fire and other accidents would probably occur more often than when children were brought into the mill premises and looked after by older persons and their own parents. Testing samples of air is not required in a modern jute mill, where ventilation is very ample and where everything is done to keep the health of the workers good. Jute mills do not go in for humidifiers, and the standard of moisture for the air is the same as the natural moisture outside. Therefore no law introducing a standard of moisture for the air is required for jute mills. Where ordinary latrines are in use the number of workers allowed *per* seat should be considerably less than where septic tank accommodation is provided for. Our mills have septic tanks, and at present one seat for every fifty workers is allowed for. This seems to be ample. I do not consider it necessary to apply a law requiring all doors to open outwards to a jute mill, built on the shed principle. The present law gives the factory inspector full power to order any machine to be fenced, and I do not think more is necessary. Jute mills machinery is all fenced. I do not consider that a Factory Act applicable to Bengal would suit other districts, where the conditions of work, I understand, are entirely different. I do not consider that full-time medical inspectors are necessary, but a staff might be appointed so that a monthly visit may be given to each mill. I cannot give any statistics giving the results on production, wastage, and the economical working of a jute mill, caused by the varying length of the working day. Generally production is better and wastage less when there is an ample supply of labour, and *vice versâ*. If certificates of physical fitness as well as of age be required prior to the employment of children on half-time these children should be allowed to work until the next visit of the medical inspector, which, with monthly visits, would not be more than a month. No special arrangements would have to be made to secure the medical examination of half-timers. The medical inspector would visit the mill and get all the new workers brought before him for examination. Of course it would be quite impossible, both for the medical inspector and the carrying on of the work, to examine all children for the first time at once, but this would gradually right itself with the working of the Act, and all children

would ultimately have passes. Assuming that the recommendation that no half-timers should be allowed to work unless medically certified as physically fit for full-time work is accepted, I think that it would be difficult to give effect to this law. If the mill overseer directly concerned considered that the person indicated was physically fit and able for his or her work, I see no reason why that person should not be allowed to work. If the person rejected for not being physically fit by the medical inspector could not pass in one mill he would try another. In fact he would go from one mill to another so that he would come before the medical inspector every month, were monthly visits the rule, until he passed. The better plan to my mind is I think to leave the European in charge of the workers to say whether they are able for the work or not. It must be borne in mind that a man or woman who is physically unfit for one kind of work would be quite able to do easier work, and after all the overseer is the best judge of whether the persons concerned are physically fit for the work required of them. I am not in favour of the creation of a class of "young persons" as in the United Kingdom. If a law for this object be eventually passed, and say ten hours work a day fixed, this would limit the running of the engine to between 6 A.M. and 8 P.M. on the day-shift system. If less than ten hours' work be allowed, then for every hour less the engine would practically be run that hour less *per* day, until a day of twelve hours obtained. Of course extra hands could be taken on to run the full time of from 5 A.M. to 8 P.M., but this would complicate the shifts very much, and put up the manufacturing expenses considerably. The proportion in our mills of women is 18 *per cent.*, of half-timers 13 *per cent.*, and of young persons 20 *per cent.*, leaving a balance of 49 *per cent.* male adults. The hours fixed for women alone would practically determine the number of hours the engine would run during the day, remembering of course that where the shift system is in vogue, and one-half more hands allowed for shifting, the number of hours run by the engine would be greater, but not in proportion. Double shifts also could be arranged, but this would be more expensive, and in consequence more or less prohibitive. I am not in favour of a definite time limit being fixed by law within which only the employment of operatives would be legal, overtime requiring to be worked for special reasons would be impossible under this clause, if it applied to adult males. I am only conversant with the jute industry as obtaining in Bengal, and I am not therefore in a position to say whether that industry will require special treatment in the event of a change in the Act applicable to the whole of India. I do not think that inspectors should be brought from home. The working of the mills is so entirely different—the workers and conditions surrounding them so diverse from the home life—that inspectors brought from home could not understand it for a considerable time. The language difficulty too would crop up, and the home inspectors would be entirely in the hands of their interpreters. I may mention that a number of languages are used in jute mills. Inspectors would have ample opportunity for training in India, and do not require to be specially trained at home. If a more stringent Factory Act be introduced than that at present in force, I think that it should be gradually brought into use, especially if the age limits be altered in any way. As regards housing of factory hands the mill-owners are building *pucca* brick houses for the poorer classes of workers, and only charging a nominal rent for same. It is to their interest to do so, so as to have ample labour about. I do not see that provision for this purpose should be introduced in the Factory Act, and I think as far as jute mills are concerned this matter might be left to the owners of the mills. As far as jute mills are concerned the health of the workers is well looked after, and workers come very willingly to a jute mill. If some possible means could be devised to give us a regular supply of labour in the hot season it would be a great benefit. Should a 6 A.M. to 6 P.M. day be introduced, I would suggest the Act should come into force on the 1st of July, instead of the 1st of January. The operatives at this time of the year work from daylight to dark, say 5 A.M. to 7 P.M., and there would not be the same trouble with regard to payment of night working for the short time in the morning and evening, when artificial light would be used. This would come in gradually with shortening days, not all at once as would be the case if the Act came into force on the 1st January.

Mr. George A. Spence.

Witness stated that he had been interested in the linen and jute industries since 1879. The working hours of his mill at present were from 5 A.M. to 8 P.M., but occasionally the engine ran from 4-30 A.M. to 8-30 P.M. These hours applied to the weavers only, as the spinners worked by shifts. The engine room staff would only have to be present fifteen minutes before the engine started, and one extra hand was always allowed to every four men. He admitted that the hours for the weavers were long, but nothing else could be done. The weavers themselves went to those mills where they obtained the longest wage-earning period. The holidays which they took were the result of the good wages they earned, and if they did not make so much money they would not want to go away so often. From a labour point of view it would be an advantage to have the hours of work reduced. In the event of a reduction of working hours the weavers would undoubtedly stick more to their work. Should the hours be reduced to twelve, he did not think that the three hours so lost would be made up, but the weavers would turn out a larger production hour for hour. If the working day were restricted those factories which had land would extend their buildings, but not every mill was in a position to do this. To enable the weavers to have intervals of rest they allowed one extra daily hand for every four broad looms (53-inch and upwards), but the mill did not supply daily hands for the other looms. Witness admitted that the law in regard to half-timers was not enforced, and considered that it was better so. It was necessary that there should be some elasticity concerning the age limits for children. Government had allowed this to go on, probably because they saw the foolishness of enforcing the provisions as they now stood. Ten *per cent.* of the children were under nine years, but he could not give any figures as regards full-timers under 14 years. It would be better from the mill point of view, if the provisions relating to children were enforced gradually. He was in the industry in 1891, and there had been since then a change for the worse so far as the half-time children were concerned, owing to the great demand for child labour. In 1891 there were not so many youngsters under nine years employed in the mills as at present. He saw no hardship in these children coming to the mill at 5 A.M. Any boy fairly well developed and willing to work was placed on full time without further consideration. Witness did not approve of reverting to the old ages of 7 and 12, but he thought that a child might be allowed to work at eight years of age. If a Commissioner had seen an emaciated child in a mill the probability was that that child had only

Oral evidence.

Mr. George A. Spence.

just entered mill employment, and had not had time to receive proper nourishment. Personally he had had only one accident to a non-working child inside his mill, and there were probably several accidents to young children when playing about outside the mill. They once provided a room for these young children, but the experiment was not a success. Witness had no objection if the half-timers came later in the morning and left earlier at night. He was Chairman of the Titaghur Municipality, which contained 8 mills, a census population of 16,000, and an estimated population of 50,000. They had under consideration a large drainage scheme costing R85,000, of which sum the mills were contributing R23,000, and Government R10,000. Every mill in the municipality also spent a large sum of money in providing filtered water. There was overcrowding, both as regards the number of huts and the number of dwellers in them. Witness was of opinion that the operatives did not desire any alteration in the working hours. Personally he did not object to a 6 A.M. to 6 P.M. day, and his proprietors were practically of the same opinion. Speaking on behalf of jute mill managers, he knew they would welcome a 6 to 6 day. They once tried a Saturday half-holiday at his mill to clean up, but no other mill followed their example, and they had to discontinue that plan. His proprietors would not object to a 6 to 6 day. If the Commission introduced a restricted day he hoped they would fix definite times for starting and finishing, or perhaps allow the mills to give formal notice of their hours to the inspector.

Witness No. 186.

Mr. Thomas Burns, manager of the Khardah Jute Mill, Titaghur.

Thomas Burns. *al evidence.*

Witness stated that they employed 7,090 workers, comprising 4,781 adult males, 1,207 females, and 1,102 children For the last ten years their mill had worked 15 hours a day, and during that period the working days had ranged from 303 in 1899 to 308½ in 1902. He could provide no accurate statistics relating to the economical working of a jute mill, based on the length of a working day, as so many factors had to be taken into consideration. If a certificate of physical fitness and age were required prior to the employment of half-timers, this would lead to corruption unless the granting of certificates were placed in very reliable hands. The present system was all that was necessary, except that the Civil Surgeon should visit the mills every month instead of every three months, as at present. Witness disapproved of a second examination when the half-timer reached 14 years of age. He considered that the jute mill workers were a healthy and sturdy class of people, and that they were well looked after by the mill authorities. The owners of mills provided houses for their hands where necessary, filtered water, and up-to-date sanitary arrangements, with the result that the death-rate had been considerably reduced. He disapproved of the proposed "young persons" class. The young people of India developed at an earlier age than the young people of the West, and were often married at the age that it was proposed to legislate for them. Witness was opposed to any restriction of adult working hours. He had been in daily contact with the workers for 21 years, and from enquiries made, he knew that there was no desire for any alteration in the present system. The education of mill children was an Imperial question, and should be left to Government. Concerning ventilation, he considered that the Calcutta jute mills were well ventilated and second to none in the world in this respect. In his opinion a fixed twelve hours' day would mean working by one shift, and an enormous number of men would be thrown out of employment Again, if the "young persons" class were created, it would contain persons who were married, and they would be prevented from earning a full day's wages for the support of their children. A reduction of hours would also mean a curtailment of the European staff, the members of which earned high wages Situations in the jute industry in Calcutta were eagerly sought after by Dundee men, and he denied that their working hours in India were at all excessive. Witness considered that the workers were as steady now as in the old daylight working days. The weavers always had a shift system among themselves. In 1904 a twelve hours' day was tried for six months, but it was not so economical as the present system, and the workers themselves were dissatisfied with the shorter hours He did not see how the present system of working in the jute mills could be improved. Their Civil Surgeon was the medical officer of the 24-Parganas, and he had only rejected about twelve children in the last ten years. Witness was of opinion that all new children were presented to him for examination. If a boy was well developed he was placed on full time irrespective of age. The age qualification was disregarded so far as full-timers' work was concerned. Witness had no objection to the age limits of 9 and 14 for half-timers and adults respectively being enforced. When the doctor paid his quarterly visit he could see the children in the shift then at work. He would consequently only see half the children in the mill. If facilities were provided for the daily inspection of children he had no objection to their having to obtain a certificate before commencing work. In the hot weather batches of children came down from up-country every day, and so nothing less than a daily inspection would suffice. He did not think that a mill manager should be held responsible for any child found working in the mill without a certificate. It would also be a hardship to the children if they were detained in Calcutta for several days pending examination and not allowed to work. He approved of the mill keeping the child's certificate.

Note.—The witness was not asked to submit written evidence.

Witness No. 187.

Mr. D. C. Forrester, manager of the Fort Gloster Jute Mill, Calcutta.

D. C. Forrester. *al evidence.*

Witness stated that he had been for sixteen years in the jute industry in India. Their mill employed 8,000 adults and 733 half-timers. Their actual working hours were from 5 A.M. to 8 P.M. and

no time was added at either end. The weavers worked in sets of four, each man contracting to keep his loom going for fifteen hours, and the four weavers between them paid for an extra hand. Each of the four weavers had to pay this man not less than eight annas a week. The five men then looked after the four looms,—work which would be done by two operatives at home. The name of the extra hand was entered in the mill book, but his wages were not entered up. Witness thought that none of the weavers actually stood at their loom for more than 10½ hours a day. If one considered the relative physique, then the labour in their mill was about as hard as the labour at home. The mill had a minimum task for the weavers, and if a man did not turn out 15 cuts a week he would be dismissed. There were 84 yards to a cut. With a shorter day, he was sure the mill would not get the same production as at present. Piece workers might work harder, but the daily-wage men would not. If the working day were reduced to 12 hours, the gross output would be very greatly reduced, but the reduction would not amount to one-fifth. They employed 5,000 Bengalis, and the remainder were up-country men. He always had a plentiful supply of labour. An adjoining cotton mill, which worked shorter hours, was always short of labour. The jute mills paid wages weekly, while the cotton mill paid monthly, and he thought that the operatives preferred working in the jute mill, where there was the double-shift system. So far as he knew, there was no midday stoppage in the cotton mill. His opinion concerning the working day was that the Commission should let well alone He approved of the present system. The Bengalis did not take holidays like the up-country men, and so about 75 *per cent.* of their mill hands worked steadily throughout the year. Three years ago they tried a daylight working day, but the operatives wanted the same wages as when working extra time by electric light The weavers had never complained to him of long hours. Witness did not think that the system of *dasturi* was common as regards the employment of children. He disapproved of their having to obtain a certificate of age and fitness before employment. A visit from the certifying surgeon every three months was quite enough. Owing to the shift system, only half the children could be produced for his inspection at any one time, and even if the mill were stopped he would not guarantee that all of the children in the shift would be produced. The industry would be inconvenienced if children had to wait some days for a certificate.

Mr. D. C. Forrester

NOTE.—The witness was not asked to submit written evidence.

WITNESS No. 188.

Lieutenant-Colonel D. G. Crawford, I.M.S.

Witness stated that he had had eighteen months' experience of the jute industry while Civil Surgeon of the 24-Parganas, and also six years' experience in Hughly. He had been inspecting mills during this period. He had not noticed any deterioration in the health of the jute workers; he considered them a stronger class, and better off, than those in outside employments. In his opinion the length of the working day had not adversely affected the health of the operatives. As regards the early attendance of the children at the mills, witness thought that the only hardship lay in their having to get up early in the cold months. During nine months of the year every native was up at five o'clock. He was of opinion that the working hours of the jute mills were too long, and he approved of a 56 hours' week, with ten working hours a day for five days, and six hours on Saturday. The working hours should be from 6 A.M. to 6 P.M. with a two-hour stoppage at midday. The present long hours had not had any deleterious effect, because no individual actually worked them. The weavers might apparently work long hours, but with two men to two looms it was easy for them to arrange intervals of rest. If the hours of adult labour were restricted, it would be almost impossible to find out, or prove, whether any individual had worked over his twelve hours, or whatever the number fixed might be. Witness therefore thought that they would have to restrict the working hours of the mill. The Saturday half-holiday was an even more important point than restricting the hours of work on other days, for it would give them the opportunity for resting on the Sunday. At present the cleaning up was done on Sundays, and he thought that all such work should be done on Saturday afternoons. A large number of operatives dropped out of mill work after a more or less brief time at it. He would not say that this was on account of the strain of the work. Often a man caught some disease, and continued at work until it was too late to have it cured. Often the disease was not caused by any strain occasioned by the work, and if the operative had only had medical advice in time he could have been cured. From the nature of their work he should have expected the operatives to suffer from nervous break-down, but he had not found this to be so. Mill hands were not prone to any special disease, and the up-country man was stronger than the Bengali. When he inspected a mill he saw the children who were then at work; that is, he saw only one shift, or half the children employed in the mill. To a certain extent it was true that he saw only those children who were produced before him. He saw all the new children weekly at Gauripore mill, and there were a fair number of rejections. The principal question in the engagement of any child was whether that child was able and willing to work, and it had always been understood that it was not compulsory to get the child medically examined. As a matter of fact a child dismissed as under age at one mill could go elsewhere, and be employed at another mill. He estimated that from five to ten *per cent.* of the children in the jute mills were under nine years of age. He could not say why a prosecution had never been undertaken. In his opinion it would be difficult to prove that the manager was aware that the child was under age. To some extent the question of a child's age was a matter of guess work, and a well-grown child of eight might easily pass for nine. The fact that the managers did not obtain certificates for the children before employing them could hardly be taken as implying that they accepted the responsibility. If an inspector saw a child under nine years at work, he would bring him to the office and ask that the child should be struck off the roll, and this would be done. That was the procedure usually followed, and so far as witness knew there had never been a prosecution. If they wished to lay down a rule that no child under nine should enter a mill they must inspect all the

Lt.-Col. Crawford. *Oral evidence.*

Lt.-Col. Crawford.

children every time they entered the mill, and they must also exclude all non-working children from the mill. The manager would, he thought, be glad to have a system for identifying children like that existing in Bombay and Ahmedabad, and it would be an advantage to introduce such a system in Calcutta. After such a system had been introduced, and brought into working order, he thought that two whole-time medical officers might be able to cover the Calcutta district in fourteen days. One man would not do, as there must be some allowance for holidays and sickness. Covering the ground within one week by one man was out of the question. So far as the actual work was concerned, one man would be sufficient, but a lot of time would be lost in getting about from place to place. His opinion was that the mill doctor should be permitted to pass children, pending the visit of the official doctor. It was possible that the mill doctor would give the children the benefit of the doubt, in doubtful cases. If they wished to make a certainty of the medical inspection, then every child should possess a certificate. The only other alternative was to require that *all* the children should be produced before the medical inspecting officers when they visited a mill. That would stop the mill, and be very inconvenient. The children changed about so much that it was impossible for the European assistants in the mills to know all the children in their departments by sight. Generally speaking, he did not see how it was possible to administer strictly any Act which provided for an age limit for children. The best arrangement for the efficient disposal of this certifying work was to appoint a whole-time man to visit various centres. With some assistance, the work could be done in a fortnight; and perhaps with this suggestion, which emanated from the Commission, they could combine his of allowing the mill doctor to carry out the preliminary inspection. He was not of opinion that there was any compulsion on the part of the parents to make their children work. Witness could not say anything about the life history of the hands, and did not know what eventually became of the young spinners. He knew of four accidents to non-working children; one lost a leg through being caught in the machinery, another was knocked down by a trolley, another fell against the machinery and was killed, and the fourth lost an arm through being caught in the machinery. He knew of one instance where a nursery was started, but the women would have nothing to do with it. As a rule the whole household went to work and closed their house, so if they excluded the children they excluded the women also. He thought that the great majority of births were accurately registered by the police, and the figures were used for immediate purposes, but the books were not retained for any length of time. If an operative broke down from nervous strain, he was more likely to go home than to go to hospital. Witness did not say that nervous strain did not exist, but he had not come across any cases. The European assistants did not produce the children themselves at inspections; they sent the *darwan* to collect them. It would be impossible for an inspecting officer to satisfy himself that all the new children were actually brought before him. He had found many cases of children, working and receiving pay, who were under nine years of age, and who had not been examined by any doctor. He could not say that he had made special efforts to find out whether any children were kept out of sight during his inspections of the mills.

NOTE.—The witness was not asked to submit written evidence.

WITNESS No. 189.

Mr. J. Sime, mill superintendent with Messrs. Andrew Yule & Company, Calcutta.

Mr Sime.
Oral evidence.

Witness stated that their five mills, the Delta, National, Budge Budge, Belvedere, and Central, afforded employment to 20,631 persons: 15,141 men, 2,160 women, and 3,330 children. In the Budge Budge and Central mills they worked by electric light from 5 A.M. to 8 P.M.; in the National from daylight up to 8 P.M., and in the Delta and Belvedere from daylight to dark. The firm's opinion, and his own, concerning the length of the working day, was that from the commercial or money-making point of view the present hours from 5 A.M. to 8 P.M. were the most profitable. Personally, he should like to see a fixed working day from 6 A.M. to 6 P.M. with three hours off for the women and children. He thought that the gross production would be less in the shorter day. The daily-wage men would not work harder, but the piece workers might apply themselves more steadily. The shorter day would admit of the more economical working of the mill, and a fixed twelve hours' day would greatly facilitate working. He would prefer to lay down that the mill should not work more than 12 hours, rather than to impose a direct restriction on adult labour. It often happened that overtime was necessary in certain departments, in order to complete an urgent order. The hours of 5 A.M. to 8 P.M. were too long, and when men resided some distance from the mill they had very little time at home. There ought to be an early stoppage on Saturday afternoons. At present a very small proportion of the hands came in on Sundays for cleaning up. According to the interpretation of the Act adopted in Calcutta, this was permissible. Mills were never closed on Sundays in Calcutta, as they were in England. If children had to obtain medical certificates before employment, it would hamper the working of the mills, unless daily facilities for inspection were provided. He did not consider it any hardship to a child under nine years of age to be employed in a jute mill. He would not describe the present inspection for age as a very close scrutiny. Personally, he thought they should be allowed to employ children pending the visit of a medical officer. He did not think that a 6 to 6 day for the women and children would be injurious to their health. It would not adversely affect the industry to restrict the working period for women and children to the period from 6 A.M. to 6 P.M. though it might increase the cost of production somewhat. Adult labour should not be interfered with, and a man should be free to work overtime when occasion demanded. He had no objection to the proposed "young persons" class for young adults between the ages of 12 and 16. Women and children up to 16 years needed protection, while adults did not. There was always a big demand by the operatives for the houses provided by the mill. These houses paid as an investment. There were never any houses empty.

NOTE.—The witness was not asked to submit written evidence.

WITNESS No. 190.

Mr. Andrew Small, manager of the Lower Hooghly Jute Mills, Calcutta.

Mr. Andrew Small. *Written evidence.*

I am manager of the Lower Hooghly Jute Mills at Buddertollah, which contain 650 looms and employ 4,500 hands. I have had 22 years' experience of jute mills in this country. The average daily running of the engine for productive purposes is 12½ hours. (Now changed to 15 hours.) As half-timers only work 6 hours a day, I do not consider a medical certificate as to fitness at all necessary. I am not in favour of making a class of "young persons." Definite time limits should be prescribed within which only the employment of operatives would be legal. I recommend that on Monday, Tuesday, Wednesday, Thursday, and Friday the hours should be from 6 A.M. to 6-30 P.M., with a stoppage of the engine for two hours between 12 noon and 2 P.M. for rest and refreshments. On Saturday the hours should be from 6 A.M. to 2-30 P.M., with a stoppage of the engine for one hour between 9 and 10 A.M. for rest and refreshment. This arrangement would provide a 60 hours productive working week, for which only a single set of workers would be required. The employment of women at night should be entirely prohibited. The minimum age for children should not be raised beyond nine. Certificates of physical fitness for children are not necessary, nor are they required for half-timers before the latter are allowed to work full time. Children should be employed in regular prescribed sets. The provision by factory owners of education should be an optional matter. Non-working children should be prohibited from accompanying workers, unless the mill has a nursery with capable women in charge. I think the jute mill industry should be legislated for in any amended Factory Act, according to its own particular needs, without reference to the requirements of other descriptions of textile or other industries in India. Inspectors from the United Kingdom are not required. There ought to be no difficulty in getting qualified men in India. The limitation of productive working hours to 60 a week would be productive of good in many ways. (1) The periodical stoppages during the day and on Saturday afternoon would enable the machinery to be kept clean, and in better order, than it possibly can be under the present system, and therefore it would be capable of producing better work. (2) More work *per* loom *per* hour would be got off. A weaver working under the present long hours begins to fag after he has wrought a full 10 hours; this work is not so good, and more wastage is made. (3) The difference in the cost of production between a 60 hours week with a single set of hands, and a 90 hours week with a double and sometimes treble shift, would make at first only a trifling increase in the cost of production *per* ton, and would not affect the supremacy of Calcutta over Dundee and Continental competitors. In Calcutta the cost now of producing a ton of hessians averages about R120, which would probably be increased to R126 with a 60 hours week. In Dundee the average cost of production is not under the equivalent of R180, so Calcutta has nothing to fear in the way of competition should our hours here be fixed at 60 by legal enactment. (4) It is true that the operatives (other than the weavers) do not work individually more than 9 hours a day. It is not the length of individual working hours that is complained of, however, but the manner of their distribution. It is one thing to work during a natural working day, and quite another to get up at 4 or 4-30 A.M. according to the distance to be travelled when on the morning shift, and not get home until 9 or 9-30 P.M. when on the evening shift; when after that the evening meal has to be prepared. And that too in all weathers during the cold, foggy, winter mornings, and all through the rainy season. This present mistiming of the working hours has a tendency to lower the physique especially of the women and children. (5) The limitation of the hours to 60, and the half-holiday on Saturday, would tend greatly to ameliorate the lot of the vast number of European assistants now employed at the mills. Although they have their stated hours of rest during each day, they are never off the compound, and are always at beck and call at all hours from Monday morning until Saturday evening.

NOTE.—The witness did not attend for oral examination.

WITNESS No. 191.

Mr. D. W. Melville, manager of the Upper Anglo-Indian Jute Mill, Kankinara.

Mr. Melville. *Oral evidence.*

Witness stated that the mill afforded employment to 2,000 men, 500 women, and 500 children. There was no electric light in the mill, but the hands had not left on that account. Mills adjoining theirs worked longer hours by electric light, but he had never suffered from lack of hands owing to the short hours of working. Even in the hot weather the mill had a bare complement, and the production was never seriously curtailed. Witness had made enquiries among the men, and in his opinion they certainly preferred to work without artificial light. The weavers in this mill earned power wages than those in the long-hour mills, but in spite of that they obtained as many weavers as they required. Some of their weavers had worked steadily for over three years without going away for a long holiday. Twenty *per cent.* of them, in fact only took a few days off in the year. The weavers had never appealed to him to be allowed to work longer hours. If they wanted to do so they would go to neighbouring mills. A good production for a twelve hours' day would be 240 yards *per* loom. He calculated this at 140 picks *per* minute, allowing fifteen *per cent.* for legitimate stoppages. This meant about ten and a half hours' actual working in the course of the day. Witness was of opinion that each weaver went out three times a day, for one hour each time, and so worked only nine of the twelve hours. It was utterly impossible for any weaver to work a fifteen hours' day with only three hours off. In the long days their weavers had more than three hours off. The production of 240 yards was a fair actual average for the looms, though some weavers made more in order to obtain a larger bonus. The average pay of the weavers, including the bonus, was R3-8 a week; some made R4 and one man over R5. The operatives were aware that the length of the working day was under consideration at present, and they wanted a ten hours' day, and the Saturday half-holiday. The men quite understood that with shorter hours their earnings would be less, but in

Mr. Melville.

his opinion they would apply themselves more steadily in the shorter day. He admitted that a proportion of up-country men liked to work at high pressure in order to earn high wages and then take a holiday at their homes. This, however, was not general. Taking the spinners as a class, there had been an improvement in skill. Nineteen years ago two-thirds of the spinners were Bengalis, but the up-country man had now come in, and was a stronger man and a better worker than the Bengali. Witness had not noticed any deterioration in the health of the children. Their mill had no intention of introducing electric light. His personal opinion was that, so far as the proper control and supply of labour was concerned, they would never be on a sound and satisfactory footing until the jute industry had a ten hours' day. It would not be good for the trade to introduce this all at once, and it must be brought about gradually First of all, the hours should be reduced to 13 or 12. Lately there had been great expansions in the trade, and it would be beneficial if the output could be curtailed somewhat. With a shorter day the hands would not take such long holidays, and there would not be that scarcity of labour every hot weather which caused so much trouble at present. If the hours could be reduced to 12, it would be a half-way house towards the ten hours' day which would, he thought, ultimately be reached. The spinners could not work more than a ten hours' day in one shift. A larger number of men moved about from mill to mill, but he would describe this floating body as the indifferent workers. The good weavers went to those mills where they could get plenty of good yarn. The *sirdars* had a great deal to do with this changing about, and they undoubtedly levied *dasturi*. Some hands, too, borrowed money and then went away in the hope of escaping payment. A small percentage was addicted to drink. The amended Act of 1891, as regards the ages for the employment of children, had never been enforced in Calcutta, and the children were as young and immature now as they were before the Act was revised. An attempt was made by the factory inspector to enforce the Act, but this came to nothing; for if the industry had had to wait until children of proper ages were obtainable, they would have had to close the mills. In order to keep the mills running, under-age children had to be employed. Twenty *per cent.* of the children in the mills were under nine years of age, but the percentage of full-timers under 14 years was not so large. Witness saw no necessity for any increase in the minimum age for children, as they were better off when working in a jute mill, which was like play to them, than they would be if unemployed. The industry had never attempted to get the amended Act altered. He had a school in his coolie lines. The mill provided the accommodation, and the municipality the teacher. At first the boys wished to be paid for attending, and now there were only twelve boys receiving education.

NOTE.—The witness was not asked to submit written evidence.

WITNESSES No. 192.

Kirtivas Mandal, Gopalsang Baru, Bibinchand Bairagi, Loku Ramzan, and Umedali Malikhina, all weavers in the Budge Budge Jute Mills near Calcutta.

Kirtivas Mandal, etc.
Oral evidence.

Our working hours are at present from 5 A.M. to 8 P.M., but we are arranged in sets of three looms each, and we either relieve each other, or engage a 'daily' worker at our joint expense, so that each of us gets a 2 hours' interval for food before noon, and one hour again in the afternoon. Thus we actually work only 12 hours a day, and get 3 hours off. But we all have to be present at the mill at 5 A.M., and are not allowed to leave till 8 P.M.; and we object to such long hours. As most of us live in villages at a distance of two to four miles from the mill, it means that we have to get up in the morning between 3 and 4 A.M., and do not get home till 8-30 or 9 P.M. Out of 325 weavers in mill No. 1, where we work, about 315 are Bengalis belonging to villages in the neighbourhood of the mill; only 8 or 10 are up-country men. The present long hours are trying to health, and we are all desirous of having the hours reduced. If we earned somewhat less than at present that would not matter if we secured more comfort and better health. Our earnings last week were R5-3-0, R3-3-0 (four days only), R3-15-0, R4-8-0, and R6-8-0 (*sirdars*) respectively. We may not have earned such good wages before the present long hours with electric light were introduced, but we were content with our earnings and worked better. We must all come at 5 A.M. and stay till 8 P.M., otherwise our looms are given to others; so that it would be no use our employing extra 'daily' hands at our own expense. What we should like is fixed hours all the year round from 6 A.M. to 6 P.M.

WITNESSES No. 193.

Kirtibas, Bholanath, and nine other spinners working in the Budge Budge Jute Mills near Calcutta.

Kirtibas, etc.
Oral evidence.

We work by shifts, each man doing about 10 or 11 hours a day. The actual working hours are not too long for us, but we object to having to come to the mill so early in the morning, and to getting away so late. The hours of a typical shift are 5 A.M.—9 A.M.; 12 noon to 3 P.M.; and 4 P.M. to 8 P.M., *i.e.*, eleven hours in all. There were just as many shifts before long hours by electric light were introduced. We all live in villages in the neighbourhood of the mill, within four miles of it, and some of us have to rise at 3-30 A.M. and do not get home till 9 P.M. Our wages last week were R3-8-0, R3-3-9, R3-7-0, R4-0-0, R3-15-0, R3-12-3, R3-5-0, R3-5-0, R3-15-0, and R4-0-0 respectively, the first four being for six days' work each, and the others for seven days each, because machinery-cleaning was done on Sunday. Cleaning is always done on Sunday; the *sirdar* is told to send so many hands and he selects a certain number of us spinners for Sunday work. We do half a day's work and get a full day's wage for it, so we all like this extra work on Sunday.

NOTE.—This, and the preceding statement, were recorded by the President. The witnesses were produced before the Commission by Mr A C. Banerji, a local barrister, who is president of the "Indian Labour Union."

DACCA.

Views of the Government of Eastern Bengal and Assam on the questions referred to the commission.

Government of Eastern Bengal and Assam.

The number of factories working in this Province is small compared with most other Provinces of India. At the close of the year 1906 there were 99 factories at work, including 79 jute presses, 9 saw mills and 7 Railway workshops. The average number of daily operatives employed was 18,002, of whom 709, or 3·9 *per cent.*, were children. With the exception of some jute presses, which work for only 4 or 5 months in the year, the factories are generally small, and the Local Government is not in a position to furnish evidence of special value to the Commission. Besides the District Magistrate, who is *ex-officio* inspector of all factories in his district, the Civil Surgeon has been appointed inspector of factories within his jurisdiction, under section 3 of Act XV, 1881, in the 13 districts of this Province which possess factories. The services of the special inspector of factories in Bengal are shared by this Government. There is no establishment employed solely for the purpose of factory inspection. The question of strengthening the inspecting staff is now under the consideration of this Government, in communication with the Government of Bengal. But while the Lieutenant-Governor is satisfied that the present arrangements for inspection provide amply for the health of the labourers, and sufficiently protect the interests of all classes of factory labour employed in the Province, he considers that every factory should be occasionally inspected by an expert inspector recruited from England, but employed only after a period of training in India, and that the managers of factories should be in a position to obtain his advice. From enquiries recently instituted, Sir Lancelot Hare is assured that there are no abuses in this Province in connection with the employment of adult males for an excessive number of hours, and that so far as Eastern Bengal and Assam is concerned, there is no case for restricting by legislation the hours of labour of adult males. It is, however, not unlikely that such restriction would be resented by the immigrant labourers who work in the jute presses of Eastern Bengal. The season is a short one, lasting not more than five months, and these men are paid at piece-work rates, being free to work as many hours as they choose. During the short season their object is to earn as much as possible. Children are employed to a very small extent in this Province. No abuse has been brought to the notice of the Local Government in respect of their employment, but the Lieutenant-Governor cordially accepts the suggestion that certificates of age and physical fitness should be insisted on before children are allowed to work in factories. To check the impersonation of children who have been certified under the Indian Factories Act as being above 9 years, by others below that age, and to prevent the employment of children on two shifts under a double set of names, inspectors of factories are required to call for the production of the certificates granted under section 5 of the Act, and if necessary to compare the thumb mark of the child with the thumb mark on the certificate; and, if considered desirable, to call for the muster roll of the factory, and to make any enquiries necessary for the purpose of identifying the children whose names are entered in it.

Witness No. 194.

Lieutenant-Colonel R. N. Campbell, M. B., I.M.S., Civil Surgeon of Dacca.

Lieutenant-Colonel Campbell. Written evidence.

I am not qualified to make any special report on the points referred to the Commission, as I have never had charge of a district in which factories, other than jute pressing and baling factories, required inspection. The class of factory operatives I am acquainted with is mainly employed in jute pressing and baling. I cannot supply statistics showing the relative healthiness of these operatives, as compared with the general average of the non-factory population of the same class. In my opinion there is no difference. The great majority of factory operatives are drawn from the surrounding population. In my opinion the factory population does not differ as regards physique from the general average of the same class. As far as I know they do not suffer more than the general population of the same class from any specific diseases. I cannot supply any statistics. In the event of definite limiting ages being prescribed, as regards certain classes of factory workers, the only method of general applicability for determination of the age of any particular examinee would be the dentition test, in conjunction with the physical development. The dentition test is fairly reliable in India. The average age at which permanent teeth appear in Indian children may be stated as follows—

(*a*)	Central incisors	7th year.
(*b*)	Lateral „	8th „
(*c*)	Canines „	10th to 12th „
(*d*)	Anterior bicuspids	10th „
(*e*)	Posterior „	11th „
(*f*)	Anterior molars	7th „
(*g*)	Second „	12th „
(*h*)	Posterior „	16th to 25th „

A child of 9 generally has 12 permanent teeth, and at the age of 13 or 14, 28 permanent teeth. The law as regards the employment of children is not evaded in this district, as far as I know. Children of 12 years and over are employed in rope making, but only to a limited extent. I am unable to give any advice regarding the appointment of medical inspectors, their pay, etc., as there is no necessity for special inspectors in this district. The standard suggested by the Textile Factory Labour Committee for latrine accommodation, *viz.*, one seat for every 25 persons, appears suitable to me.

Oral evidence.

Witness stated that he had had about seven years' experience of jute pressing factories in Naraingunj. The large majority of workers were agriculturists from the surrounding villages. They were not drawn from a class entirely confined to mill work, and they were as healthy as the general average of the population. He thought that the busy season lasted for about six months in the year. The work was done by contract, and he was not aware of the length of the working

Lieutenant-Colonel Campbell.

day. Only a very small number of women were employed, and the children assisted in rope making. The children were not examined by a doctor at all, and so far as the women and children were concerned there was no attempt to enforce the provisions of the Act The only workshop where the children were certified for age was the Eastern Bengal State Railway workshop. In several of the jute presses no children were employed at all, and in others several of the children were probably under 14 years of age. They were over 12 years. It would not be any hardship to the owners to have these children examined for age, as required by the law. Comparatively little rope was required for baling, and so the children probably did not work late. There was a certain amount of fluff in the sorting sheds, which would in some degree be injurious to health. He had seen no cases of phthisis amongst the workers, but occasionally an European assistant complained of irritation in the throat. He had never met with a case of tetanus due to jute pressing work. Witness did all the inspection work in Naraingunj. Besides the railway workshop and jute presses there were electric light works in Dacca and a soda water manufactory at Naraingunj. The electric light works did not come under the Act, and they were controlled by a trust consisting, he believed, of the Commissioner and Collector of Dacca, and the Nawab of Dacca. Witness was not in charge of the jail at Dacca, and so could not give definitely the average weight of the inmates; but he should think that 108 lbs. would be a fair average weight for a native. In his opinion the workers were not overworked in the jute presses. Registers of the workers were only kept in some of the bigger factories. He was not qualified to say that the provisions of the Act relating to children were not carried out. The children only had very light work, but there were no regulations to prevent them working over seven hours He had received no rules from Government on the subject. The law in regard to children was enforced in the railway workshops. In the jute presses the children only worked in the outside sheds for rope making, and they were not exposed to any danger from machinery or from dust or fluff. Witness sent his inspection reports to the Magistrate, who forwarded a copy to the manager of the factory. There was very little difference between a child of over 12 and one of 14. He regarded dentition as the chief test of age, but would also consider physical development in certain cases. He knew of no prosecution in Naraingunj under the Factory Act. He considered that one in fifty latrine accommodation was sufficient.

WITNESS No. 195.

Mr. P. E. Suttie, Naraingunj.

Mr. Suttie.
Written evidence.

I am unable to answer any of the questions put to me, having no knowledge or experience of the matters therein referred to. The business under my control is that of jute baling, in which work is in full swing for only a few months of each year All the company's employees are free will piece-workers, and we have no control over them in respect of their hours of work, etc In no case are children employed by my company, but they sometimes accompany their relatives (fathers or brothers) and assist them. As a general rule no work is done except by day light The hours of work vary from 10 to 12 hours a day, according to the length of the day, and all workers stop to eat in the middle of the day In my opinion no legislation is necessary in regard to the employment of labour in connection with any of the jute assorting and baling concerns, that I have ever seen.

Oral evidence.

Witness stated that he had been in Naraingunj for fifteen years; he represented the Naraingunj Company Limited. They had two factories; in the one there were four hydraulic Boomer *kachcha* presses, and in the other three Watson's *pakka* presses. In the season they would employ about 700 men in the *pakka* presses and about 500 in the *kachcha* baling establishment. They worked an average twelve hours a day, and in the *pakka* press there was night work for 20 days or so a year, the press working from 7 A.M. to 7 or 8 P.M. There was no electric light in the *kachcha* press The insurance policies which they accepted permitted them to work from 5 A.M. to 9 P.M. They were busy from the beginning of August to the end of December; they then went on quietly to March or April; and during the remaining four months the presssss were practically closed. All the labour, both local and imported, was supplied by contract. They never paid the labourers direct, and kept no register of names, only a register of the total number of hands employed. In the rope making department of bale presses some small boys were brought in by their parents The rope making proper was done by the men, and the boys only assisted in the very light work in connection with it. The children did not work over seven hours a day. They come in at seven in the morning, work till twelve or one, then they clear up and leave. There were no regulations to prevent under age children from working beyond seven hours. The children worked in a free and easy manner, and there had never been any question raised about them working over the legal time. No child was allowed in the press house where there was machinery. The doctor made his inspection periodically The firm had no control over the children, and they could not therefore very well enforce a rule that no child should work without first obtaining a certificate. To keep a register of the children would be impracticable, owing to the way in which they changed from press to press. If the contractor knew that they had to keep a register of the children he thought it might be managed, and the firm could place *darwans* at the doors to prevent all children without certificates from entering. He thought that an adult worker made about one rupee a day, but the children merely assisted their parents and received no regular wages. The rates of pay to the contractor rarely varied, but sometimes money had to be advanced temporarilly to the imported labourers who came largely from Mirzapur. The imported labourers also went from press to press, but the contractors were not greatly inconvenienced thereby. The owners themselves did what they could to recover advances if a man came to one press with an advance owing to another press. All the large firms were obliged to import labour, but some of the smaller firms could get sufficient labour locally. Even at the height of the season there was not a scarcity of hands. Witness knew of no press where work commenced at 4-30 A.M. Their presses worked from 7 A.M. to 5 or 6 P.M. and the men took it in turns to have their meals at midday. The work at this time was slacker, but the presses did not stop altogether. They employed a sufficient number of men to keep the presses going at full strength, after allowing for the percentage of hands always absent. All the

Mr. P. E. Suttie.

work was piece-work, and the only wages paid direct by the firm were those to the *darwans*, mechanics and clerks. There was no fixed meal time for the factory, but the coolies who brought the jute stopped for two hours in the middle of the day. The firm understood that the whole of their premises were under the Act They never worked on Sundays if they could possibly help it, and even on those exceptional occasions work would only last for half a day. He considered that the Sunday's rest was necessary for the workers. The *hath* or market day was on Thursdays, and the men took it in turns to go out for an hour or two on that day. It would be a great advantage to everybody if the *hath* could be changed to Sunday. Work was not stopped however, on Thursday owing to the *hath*. The medical officer came about once every two or three months. The special inspector had made visits, but not so often as once a year. There were some small foundries and engineering works in Dacca, but he knew of no other factories or industries in Eastern Bengal and Assam which would come under the Act. A coarse short staple cotton was grown in the hills, and some of it was exported. Cotton ginning was also carried on by Messrs. Ralli Brothers at Naraingunj.

Witness No. 196.

Mr. C. R. W. Bryan, Naraingunj.

Mr. C. R. W. Bryan. *Written evidence.*

I can furnish the Factory Labour Commission with very little information of value, as the questions forwarded are applicable only in a very minor degree to the jute factories or rather pressing establishments of the *mofussil*. Most of these questions are framed, as I understand them, as applying to regular factories where workers have for the most part to deal personally with machinery of some kind, and where in consequence it is of course necessary that regular hours, etc., should be kept. In baling or pressing establishments as conducted in Naraingunj and other *mofussil* stations this is not the case. The following figures give information as to the quantity of labour employed in the various establishments belonging to this firm :—

Messrs. M. David & Co.

Narayangunj head branch	...	Men	1,450	Women	150	Children	40/50
Sitalackia	,,	...	,, 880	,,	42	,,	38
Kassipur	,,	...	,, 470	,,	22	,,	40
Tanbazar	,,	...	,, 300	,,	none	,,	none
Chandpur	...	...	,, 300	,,	7	,,	9
Madaripur	...	...	,, 180	,,	2	,,	20

The above figures show the average number of people working in the height of the jute season, and do not represent the yearly average. No women or children are ever employed on machinery, *i.e.*, in the actual press houses themselves. There the work is confined to a very small percentage of the total number of employees. The hours of work are from daylight to dark, with 2 to 3 hours off during the day.

Oral evidence.

Witness stated that the whole of their work was done by contract. The firm only kept the names of the assorters, and paid them direct. The rope making was contract work, and they did not keep the names of the children. Probably half the children were under 14 years of age, and so far as he was aware no attempt had ever been made to enforce the Act in this respect. No steps were taken to ensure that the children did not work beyond the number of hours laid down in the Act. In the height of the season the presses might work from 6 A.M. to 9 P.M., but that would be the longest day. In the *pakka* press they employed one-third extra hands more than were required for legitimate working, and extra men were also employed in the *kachcha* press. The men arranged intervals of rest amongst themselves. The only scarcity that he experienced was amongst the cooly labourers for carrying jute. It would not interfere with the work if all the children were examined, and only allowed to work so many hours a day It would be possible to employ adult labour in place of the children, though it would cost more in wages, but the number of children employed was so small that it would not affect the work one way or the other. Seventy-five *per cent* of the labour in the *pakka* press was imported. The medical officer inspected twice a year. The boiler inspector came every year, but he did not think there had been a regular factory inspector near the place for years. They had got on perfectly well without inspection, but were quite willing to be inspected if that was thought desirable. They very rarely worked on Sundays. He considered six days work a week sufficient for the men, and if they stopped on the Sunday they got better work out of them. They could not get enough local labour and so had to import labour for the *pakka* presses. They understood that the whole of their premises came under the Act, though they did not consider that the provisions of the Act were really necessary in the case of jute baling premises in the *mofussil*.

Witness No. 197.

Mr. G. Morgan, Naraingunj.

Mr. G. Morgan. *Written evidence.*

I represent the Sonakunda Baling Co., Ld., Naraingunj. There are about 1,000 people employed in the carrying, assorting, baling and exporting of the jute. The usual jute season period is 1st August to 31st January. The presses work usually from 6 A.M. to 6 P.M. The average number of hours a person employed in a press house works in 24 hours is about 12 hours. They work at the presses in shifts, and usually take about 2 hours off during the working day. Coolies and assorters rest whenever they feel inclined, as they are paid by piece-work. I do not see any necessity for bringing jute presses under the Factory Act. My reasons are :—

(1) No night work can be done, as jute cannot be assorted by artificial light, and the presses are only allowed to work up to 9-30 P.M. under the insurance tariff.

Mr. G. Morgan.

(2) The only questions to which the Factory Act would apply in jute presses are:—

(*a*) Coolie lines,

(*b*) Water-supply,

and these matters hardly require a special Act.

(3) The whole labour is practically manual labour. Jute presses are in much the same position as tea gardens, and there is no proposal to bring the latter under a Factory Act, nor is there any necessity for doing so.

Jute presses have no night work, so the question of women working at night does not arise. If it is decided to make the Factory Act applicable to all jute presses, I would suggest that a special part be made for them alone, as very little of the general Act would be applicable to jute presses. This part might deal with:—

(1) Hydraulic machinery and the safe-guards necessary. This only refers to "*pucca*" balers, as "*kutcha*" presses require no safe-guards.

(2) Accommodation in coolie lines.

(3) Coolie line latrines, providing one seat for every 25 persons (this is our municipal rule at present).

(4) Drinking water-supply.

Note.—The witness did not attend for oral examination.

Witness No. 198.

Mr. A. Nicoll, Chairman of the Naraingunj Chamber of Commerce.

Mr. A. Nicoll.
Written evidence.

I am managing agent of Messrs. R. Sim & Co., Ltd., Naraingunj, jute commission agents. The labour conditions obtaining in the pressing and assorting of jute in Naraingunj and most *mofussil* stations being so different from those prevailing in other districts of India, it will only be necessary for the following reasons to reply to certain of the questions upon which evidence is required by the Commission:—

(1) The working season only extends over a period of 6 to 8 months in each year.

(2) The labour for importing and exporting jute is all adult males. Their working day is from daylight to dark with breaks of 2 hours or more for meals, etc.

(3) In press houses (without, I think, any exception) only male adults are employed. This work is carried on under the shift system, and the usual working hours are from daylight to dark; in the case of a few factories, work is carried on in the height of the season for an hour or two longer by the aid of the electric light. Men employed in press houses work very hard for a few months of the year, but in no case for more than 7 to 8 hours a day.

(4) In the assorting of jute women and children (the latter come with their parents) are employed to a very small extent only. This work is carried on in sheds or godowns, entirely separate from press houses, in which there is no kind of machinery whatever. The assorters of jute are paid by piece-work, and being under no restrictions as regards working hours come and go as they please. In my opinion the working hours of male adults should not be limited, as the conditions prevailing in *mofussil* jute press houses renders limitation of working hours unnecessary. If it is considered advisable to restrict working hours, where the shift system is in vogue, I would favour the working hours from 5 A. M. to 8 P. M., provided that no male adult should work for more than 12 hours out of the 24. I do not favour the suggestion that the engine be stopped for half an hour each day, as this would be of no benefit to any class of labour. In view of the very small number of children employed in *mofussil* jute factories, and the fact that such as are employed work only under their parents in the lighter kind of work, the various questions regarding children are of no interest to jute press houses. Jute godowns and press houses are in all cases well ventilated, while the sanitary arrangements in all factories in Naraingunj are under the control of the Municipality, and are periodically inspected by the Civil Surgeon of the district who holds the office of inspector of factories. I may mention that the above evidence has been drawn up in consultation with, and embodies the views of, the members of Committee of the Naraingunj Chamber of Commerce, which consists of representatives of the following firms:—

Messrs.	M. David & Co.,	represented by	Mr.	C. R. W. Bryan.
"	Ralli Bros.	"	"	A. D. Mangos.
"	M. Sarkies & Sons,	"	"	T. David.
"	R. Glen & Co., Ld.,	"	"	R. Glen.
"	Naraingunj Co., Ld.,	"	"	D. Mactavish.
"	Donaldson & Co.,	"	"	W. H Banks.

Note.—The witness did not attend for oral examination.

WITNESS. No. 199.

Major S. L. APLIN, I.A., Deputy Commissioner, Maulmain.

Major S. L. Aplin. *Written evidence.*

In Maulmain there is no necessity to limit the working hours of adult males. The usual hours of employment are from 6 A.M. to 11 A.M. and from 12-30 P.M. to sunset, *i.e*, about 6 P.M. The physique of the workers has not been affected by long hours. If hours are limited, I think the maximum number of hours fixed should be 12.

I think—

(1) that, except when working by shifts, the legal working hours should be from sunrise to sunset or if the same hours are fixed for all the year round, 5-30 A.M. to 6 P.M.;

(2) that the engine should be stopped for at least half an hour between 11 A.M. and 1 P.M; and

(3) that in factories working on the day-shift system the legal working hours should be from 5 A.M. to 8 P.M., provided that no adult male should work for more than 12 out of every 24 hours.

There have been no instances of illegal employment as adults of persons between the ages of 12 and 14 that I am aware of. Very few children are employed in the mills here, and a special register of all workers under the age of 16 is not necessary. I do not think women are ever employed here at night. But in any case to prohibit their employment is not, I think, necessary. Not only are children seldom employed here, but those employed are, I believe, never less than about 12 years of age. If the minimum age were raised, therefore, it would not affect anyone here. So far as Maulmain is concerned, therefore, certificates of age and physical fitness are not required. The same answer applies to the case of children who have hitherto worked half time and are allowed to work full time as adults. No legislation is necessary here to prevent the employment of children except in sets; or to compel factory owners to provide elementary education for children working in the factories; or to prohibit non-working young children from accompanying workers to dangerous or unhealthy parts of factories. It is unnecessary to test samples of air taken from factories here with a view to secure proper ventilation. The rice and saw mills are sufficiently ventilated. In Maulmain, where there is a very heavy rainfall, there is usually too much, rather than too little, moisture in the air. A standard of moisture, if prescribed, could not be enforced; no water is required for humidifying purposes. The standard of latrine accommodation, *i.e*, one seat for every 25 workers, is, I think, sufficient. I do not think separate urinal accommodation is necessary. The saw mills have no doors. The doors of rice mills are kept open when work is going on. It might be an advantage to prescribe that all doors of working rooms should be hung so as to open readily from the inside outwards in case of fire I am inclined to think that further precautions for fencing machinery in saw mills are required. The saws now are unprotected. The risk of accident is possibly slight, but accidents are possible with careless workers As local conditions vary so much uniformity in the administration of the Factory Act throughout India cannot, I think, be secured. The Civil Surgeon is the medical inspector of factories here. So long as he is able to spare the time I do not think the assistance of a full-time medical inspector is required.

Oral evidence.

Witness stated that he had been stationed in Moulmain for eighteen months, and had previously been twice in charge of the district for about a year altogether. He had never received any complaints about the length of the working hours in the mills, and he understood that the long hours were always worked by shifts. It had never been brought to his notice that the mills worked an intermediate period of sixteen hours between the daylight working and the all-day-and-night hours. He considered such hours very long, and thought twelve hours were enough for any man. It was of course necessary that the supply of rice should be cleared before the rains, during which it was liable to become mouldy. In the villages the rice was stored in huge baskets covered with plaster and mounted on stakes. If there had to be a restriction of hours he was in favour of an exemption for rice mills to permit of overtime working in special emergencies. There had been no deterioration in the health of the labourers; and as the demand for labour was so great, if they were overworked they would go elsewhere. The Burmans had a natural aversion to hard work, and particularly to coolie work in the mills. The great bulk of the imported Indian labour came and went every year, but a certain number migrated into the districts. He was in favour of a half hour midday stoppage, because that would make sure that the men obtained a rest. He had not considered this matter from the mill-owner's point of view, however, and he intended the scheme of hours in his written evidence to be taken as generally applicable to all mills, without special reference to rice mills. None of the mills, with one exception, had coolie lines; and as the coolies all went home to breakfast, it was apparent that they left the mill at least once in the day and probably for considerably longer than half an hour There was no absolute certainty that they did get this half hour off, but as a general rule this could be taken for granted. He was of opinion that the indeterminate intervals of rest allowed were a sufficient compliance with the Act There were about seven hundred and fifty lodging-houses in the town, and they were governed by special bye-laws which had been recently amended. Every lodging-house was bound to take out a license in January, and the fee was Rs. 2 for each person that the house was registered to accommodate. For instance, the registration fee would be Rs. 40 for a house licensed to accommodate twenty persons. The houses were inspected as regards cleanliness and ventilation. There had been bye-laws governing these houses for many years, but they had not been strictly enforced until recently. When plague broke out a systematic inspection was started and several houses were closed. The condition of the houses at that time was distinctly bad. They were overcrowded and insanitary. Since the bye-law had been enforced some houses had been rebuilt Many houses, however, tried to evade the law and escape payment of the fee. He considered that the hands drank a great deal, and there were a fair number of liquor shops in the town. Practically no half-time children were employed in Maulmain. Witness was not aware why the order had been passed whereby the mill compounds did not come within the scope of the Act. Burmese children did not work in factories, and a very high percentage of them went to school. There had been a few accidents in the mills. Last year three

Major S. L. Aplin. boys were scalded in a boiler, and one died from shock, the result of the injuries he received. In the saw mills one man had his foot cut, but he did not remember any accidents through men falling on the top of the saw. None of the saws were guarded. He had made enquiries in reference to this and found that it was not customary in Burma to guard saws. Witness considered that the present latrine accommodation in the mills in Maulmain was sufficient. He did not think that the present system for the removal of night-soil was clean or satisfactory, but the difficulty was to suggest any other practicable alternative. He was quite satisfied with the ventilation in the rice mills, but he had no objection to the air being tested. The hands did not suffer from any special ailments, and in his opinion they were a sturdy lot.

Witness No. 200.

Lieutenant-Colonel Evans, I.M.S., Civil Surgeon, Maulmain.

Lieut.-Col. Evans. ***Written evidence.*** The class of factory operatives I am acquainted with are those working in the rice and timber mills of Lower Burma. The engine-drivers and stokers, etc., are generally Chittagonians, while the factory hands are almost without exception natives of Madras, generally "Coringhis." I cannot give statistics showing the relative healthiness of the operatives as compared with the general average of the non-factory population, as there are no specific data upon which statistics can be based, but I have formed the opinion that they are quite as healthy as any other workers. In the rice and timber mills there are no conditions operating injuriously to health. The work is carried out practically in the open air; there are no injurious or offensive materials or products to be dealt with and what dust there is is not of an injurious or irritating nature. In fact, the term "factory operative" is misleading when compared with the term as applied to workers in factories in England. The Coringhi coolie is generally a hard drinker, loves to spend his existence in the most insanitary and dirty surroundings, and comes over here as a rule in an unvaccinated state. Any diseases to which he may fall a prey are certainly more due to these causes than to the nature work in the mills In Lower Burma a comparison can hardly be made between the physique of the mill-worker and the non-mill worker, because Burmans seldom work in the rice and timber mills as coolies, and also because mill-workers are not constantly mill-workers, that is a man will work anywhere, sometimes in a mill and sometimes reaping paddy. When the reaping is finished large numbers go to work in the rice mills, which, however, in Maulmain at any rate, only work at most for four or five months in the year. In some of the large timber mills, though, I believe the same hands are more or less permanent, and these men certainly enjoy as good health as their copatriots outside. The operatives do not suffer from any specific diseases more than the general population. I know of no method of arriving at the exact age of any particular examinee, and, as far as I am aware, there is no such method. The dentition test can only be relied upon to give the approximate age. I have formed no opinion of my own upon the ages at which the teeth mentioned in the question are cut, but have, in cases requiring a decision, accepted as authoritative the information given upon the point in Lyon's Medical Jurisprudence for India. It is not my experience that the existing law as to the employment of children in factories is evaded. As a matter of fact very few, if any, factories in Maulmain employ children under 14 years of age, and none employ children under 9 The trouble of having to get the children certificated militates against their employment and even when boys are employed they are only employed in "tallying" bags or baskets of rice or paddy, and have no connection whatever with the machinery part of the mill Their work is of the lightest, and free from danger. On the question of the whole time appointment of medical inspectors I can only speak from my experience of factories in Maulmain and Akyab, and I am decidedly of opinion that the appointment of whole-time inspectors is quite unnecessary in these places I considered the standard suggested by the Textile Factory Labour Committee for latrine accommodation, namely, one seat for every 25 persons, to be suitable and sufficient. The provision of one seat for every 50 persons as laid down in the rules made under the Factory Act I consider to be too small.

Oral evidence. Witness stated that he had been stationed in Maulmain for thirteen years. The men employed in the rice mills were mostly Chittagonians and Madrasis. The former were employed in the mills proper, and the latter in carrying and coolie work. The work had not had an adverse effect upon their health. He was not aware that the employés in any mill worked for 18 hours *per diem*. He thought that the Madras cooly could work twelve hours without injury to health, but in cargo loading on steamers they worked as long and probably harder. Labour was scarce; and if the hours were too long the men would go elsewhere. Often in the reaping season residents in Maulmain had to pay from twelve annas to one rupee for a day coolie. In his opinion many of the hands were addicted to drink. In the saw mills there were about two accidents a month, mainly injuries to the hands or legs due to logs of wood falling on the men. The larger number of accidents were slight in character. From the medical point of view it would be desirable to fence the saws, but this was, from the nature of things, probably impracticable. In comparison with home, where he had had some experience in a manufacturing town, he considered that there were fewer accidents here. Witness did not pass twenty children a year, and he did not remember ever having to reject a child as under nine years. The Burmese children went to school, and were not employed so largely as Indian children The mills had no medical men of their own, and if the hands wanted medical treatment they usually went to a native doctor, or to one of ten private dispensaries in the town, or occasionally to the Civil Hospital. If it was a surgical matter they generally came to the hospital. Witness inspected each factory once a year. He visited the latrines, had a general look round, saw what children were employed, and inspected the water-supply. He did not think that any mill had the town water-supply laid on. They usually obtained their water from wells. He did not consider the present latrine accommodation enough, in some instances, and the present system of having the latrines over the river was not the most ideal arrangement, though at present the only practicable one. The amount of excreta put into the river, however, could not have any appreciable effect on health. When calculating latrine accommodation, all the hands in the factory should be included. So far as the mills in Maulmain were concerned, he did not think that any amendment of the Act was necessary, and he had seen no abuses which required to be remedied.

Witness No. 201.

Mr. Baguley, I.C.S., Officiating Deputy Commissioner, Amherst District.

Mr. Baguley. *Written evidence.*

In this district there is no necessity to limit the working hours of adult males. The physique of workers has not been affected by long hours. In the rice and saw mills of this district there has been no illegal employment of children below 12 and 14 as adults. For mills in this district there is no necessity to make any regulations whatever about women and children or young persons. Practically none are employed here. Women are not employed at night. No children anywhere near the age of 9 are employed. I do not think there are more than a dozen under 14 in the whole district. In consequence it is not necessary to trouble about certificates of age and physical fitness when working half-time or full-time. No regulations are needed about the employment of children in sets. Elementary education for factory children by mill-owners is quite unnecessary. Non-working children never go into rice or saw mills. There is no necessity to take measures about purity of air in rice and saw mills. The moisture of the air here is determined by nature, and could not and need not be altered. Air is never humidified here. In all the mills here the river is used as a latrine. Saw mills are mere sheds and the doors of rice mills are always kept open when work is going on. It does not matter whether they open inwards or outwards. I consider that large circular saws should certainly be protected in some way. Coolies are in the habit of riding up with the logs on the moving tables, and the least carelessness may result in a leg coming off. I must admit, however, that no such accident has occurred during my stay here. The Factory Act should not be made uniform over the whole of India. Regulations necessary for Bombay cotton mills are quite superfluous and harmful when applied to a Maulmain saw mill. Whether full-time medical inspectors are necessary depends entirely on the amount of work that the present medical inspector, *i.e.*, the Civil Surgeon, has to do. It is a question, in my opinion, best left to them.

Oral evidence.

Witness stated that he had been for eighteen months in Maulmain. He had had no experience elsewhere of factory inspection work. In his opinion the only matter which demanded attention in Maulmain was the guarding of the large circular saws in the saw mills. All accidents were reported to him. The accidents were mostly caused by planks dropping on the men or through the men catching their fingers in the saws. He did not remember a case of a man being caught in a pulley shaft, but there had been one or two accidents through the timber flying back from the saw. He could not say why the coolies outside the factory were treated as outside the Act. There was nothing in the inspection work in Maulmain which required a special medical man, and that work could be done efficiently by the district staff. Witness inspected the factories once a year. He was not in favour of the hours of work in rice mills being restricted. The long hours did not last for many weeks, and directly the mills became very busy they went on double shifts. The ½-hour interval between 12 noon and 2 P.M. as required by the Act was not given as a definite fixed interval. The men, however, took a breakfast interval of an hour, or an hour and a half, between 11 A.M. and 1 P.M. It could not be absolutely guaranteed that each individual man did get his half hour off in the course of the day. However, witness had never seen any half-timers illegally employed. He had never included the outside hands as part of the factory staff. Burmese children went to school, and only began work when fifteen or sixteen years of age. Up to that time they were under the tuition of the priests or at school, and practically speaking every Burman had been taught to read and write. The season for the rice mills was short and sharp, and therefore no restriction of hours was necessary. If there was to be a restriction of hours, it should not apply to the rice mills, as the men had their Sundays off, and also the time when the mills were closed owing to the supply of paddy running short.

Witness No. 202.

Mr. E. Hill, of the Arracan Company, Limited, Maulmain.

Mr. E. Hill. *Written evidence.*

I represent the Arracan Company, Limited, in Maulmain, and am in charge of their rice mill situated in the Moungan Division of Maulmain. The number of men employed varies from 30 to 30, and they work in shifts. No women or children are employed inside the mill. *I* have no definite record of how many days during the last ten years the mill has worked over twelve and a half hours a day. A fair average would probably be fifty days a year. There are also no records available from which to arrive at the average daily number of hours the mill has worked during the last ten years. The mill generally works steadily from the end of December to the end of April, doing twelve hours a day with the exception of the fifty days above mentioned, during which period the average daily hours would be about eighteen hours. Regarding the main points referred to the Commission, I am of opinion that the working hours should not be limited. If they are to be limited, a 12-hour day might be fixed for males. This to include a 1-hour interval. No further precautions for fencing of machinery appear necessary here, and I do not consider a full-time medical inspector is required. We have no record as to what the cost of running the mill *per* hour would be. At present the employés are paid on the basis of a 12-hour day; if the working hours were reduced below twelve, it would naturally follow that the cost of milling *per* 100 baskets of paddy would be increased. No children, half-timers or young persons are employed in the mill (there being no suitable work for them); the question of certificates as to physical fitness and hours of employment does not arise in connection with our mill. If definite time-limits should be prescribed within which only the employment of operatives would be legal, it would be preferable to fix a maximum number of hours, leaving it to the discretion of each individual employer to settle the time for the commencement and termination of the day's work. If a definite time-limit, beyond which no operative could be legally employed, were to be fixed, provision should made whereby it would be permissible for the employer to arrange with his employés to work overtime. In small places like Maulmain it is not always possible to get extra mill hands to occasionally work a mill a few hours overtime, and the usual staff are generally quite prepared to do such overtime, they of course being paid extra for doing so. I do not think inspectors from the United Kingdom are required for rice-mill work in Burma, nor do

Mr. E. Hill.

I think it at all necessary for factory inspectors to have a portion of their training in England If it is eventually decided to introduce a law more stringent than that at present in force, it should contain provisions introducing a certain amount of elasticity in regard to fixed hours of labour. I have no suggestions to make as regards the housing of factory hands.

Oral evidence.

Witness stated that he had had twenty-eight years' experience of the rice milling industry in Burma, twenty years of which had been spent in Maulmain. The hours and conditions of work were the same now as when he first came to Burma. The season commenced with daylight working; then they worked up to 10 P. M., and finally the mill ran all day and night. This year they began on February 17th to work all night and prior to that they had worked for a fortnight up to 10 P.M. The length of the working day depended upon the supply of paddy, and from the end of April the factory was practically closed down. After the rains a certain amount of paddy came down through those creeks that were only flooded during the monsoon, and so they milled in September or October for a few days. The new crop came in about the middle of December. If the hours were restricted to twelve, mills would have to obtain extra hands for the 10 P.M. working days It would not be impossible, however, to start the twenty-four hours working a little earlier. It was essential to keep the godowns as clear as possible, and the 10 P.M. day was therefore necessary before they started the 24-hour day. In an emergency they had worked up to 12 P.M., but on those occasions the head *tindal* obtained extra hands. The men were always paid double wages for the hours after 6 P.M. The men were quite satisfied with this, and preferred the long day to the 12-hour day. Witness could not say how much time a man had off in the 18-hour emergency days. The intervals of rest were left to the *tindal* to arrange. In the 24-hour day they had two complete sets, and the men were all numbered; but it would be possible for a man to work twenty-four hours without the company knowing. This was very unlikely, however, as the men were very independent and would not work twenty-four hours consecutively. He had never had a strike. The godown coolies were supplied by contract The contractor received so much *per* hundred bags, and presumably recouped himself for the passage money of the coolies from Madras when paying them their wages. The inside men were Chittagonians, and the majority were employed all the year round for repairing and overhauling when the mill was closed. Those who were not required did cultivating work until the next season. He had about two hundred outside men engaged in carrying rice-baskets. The hopper did not come under the Act, his hopper was in the godown. Witness did not think that the mills would be affected if the outside men were included in the Act. Up to a few years ago he personally included all these men in his return to the Local Government, but was informed that it was not necessary to do so. They employed two or three children, who were formerly certified by the Civil Surgeon. The children earned from Rs. 8 to 10 a month, and worked up to ten hours a day. He obtained certificates for the children because he understood the compound was part of the factory, but this appeared not to be so. Two women were employed in sampling rice. They worked for twelve hours, but were allowed two hours off, although they could not both be away at the same time. If women were prohibited from working at night they could get men to do this sampling work, but women were preferred as they were quicker with their fingers. Men only were employed in bag-stitching. In the 16-hour day the women came late, took time off, and did not probably work more than eleven hours a day. It would not affect the mill adversely if women were strictly prohibited from working more than eleven hours from start to finish. If a 12-hour day were introduced, then the rice-milling industry should be allowed a special overtime exemption for that period of the season when there was too much paddy for a 12-hour day and not sufficient for a 24-hour day. The overtime would only last for about three weeks in the year. There were very few absentees, and very little sickness amongst the hands The Chittagonians rarely absented themselves for holidays. The Madras coolies, who carried the bags, seemed to stop in Maulmain, but there were changes amongst the other coolies. The bag-carriers earned a high wage. The mills already had more latrine accommodation than was laid down in the Act so far as the inside men were concerned.

Witness No. 203.

Mr. H. Calder, of Messrs. Bulloch Bros. & Co., Ltd., Maulmain.

Mr. H. Calder.

Written evidence.

I represent Bulloch Brothers & Co's. Mupun Rice-mill. The number of men employed varies from 31 to 54, and they work in shifts. No women or children are employed. There is no definite record for how many days during the last ten years the mill has worked over twelve and a half hours a day. A fair average would probably be forty days a year. There are also no definite records available from which to arrive at the average daily number of hours the mill has worked during the last ten years. The mill generally works steadily from the end of December to the end of April, doing twelve hours a day, with the exception of the forty days above mentioned, during which period the average daily hours would be about twenty-one and a half hours. Regarding the main points referred to the Commission, I am of opinion that the working hours of male adults should not be limited. If they are to be limited, a 12-hour day might be fixed. This to include a 1-hour interval. No further precautions for fencing of machinery appear necessary here, nor does there seem to be any call for a full-time medical inspector. There are no statistics available to show the effect of working days of varying length on the economical working of the mill. The process of rice milling being entirely mechanical the length of the day has no direct bearing on the cost of working. As no children, half-timers or "young persons" are employed in the mill (there being no suitable work for them), the question of certificates as to physical fitness and hours of employment does not arise in connection with this mill. If definite time-limits should be prescribed within which only the employment of operatives would be legal, it would be preferable to fix a maximum number of hours, leaving it to the discretion of each individual employer to settle the time for the commencement and termination of the day's work. If a definite time-limit, beyond which no operative could be legally employed, were to be fixed, provision should be made whereby, if required, it would be permissible for the employer to arrange with the operatives to work overtime. In distant centres like Maulmain, it is not always possible

to get extra operatives to occasionally work a mill a few hours overtime, and the usual staff are generally quite ready to do such overtime. They of course, for such work, get enhanced pay. There is no necessity to get inspectors from the United Kingdom, nor for factory inspectors to have a portion of their training in England, for mill work here. If it is eventually decided to introduce a law more stringent than that at present in force, it should contain provisions introducing a certain amount of elasticity in regard to fixed hours for labour. I have no suggestions to make regarding the housing of factory hands. Mr. H. Calder.

Witness stated that he had had fourteen years' experience in the rice industry in Rangoon, Chittagong, Bassein, and Maulmain. The number of hands mentioned in his written evidence referred only to those inside the mill building. There would be about two hundred hands in the compound in addition to the internal workers. He understood that only those in the mill itself came within the scope of the Factory Act, and that the labourers who carried the rice from the boats to the godowns were outside the Act. If the hopper-men also came under the Act it would affect an additional thirty-five men. It would not affect the working of the mill if all the men in the compound came under the Act. Boys were not now employed in carrying heavy rice bags and he had no recollection of their having done so in 1897, when the question appeared to have been first raised. They had three seasons of work in the rice mill: daylight working for three months; from daylight up to 10 P. M. for one month, and all day and night for one month. There was only one shift for the 16-hour day, but in the all-day-and-night working there were two distinct shifts which changed at 6 o'clock. The engine did not stop at any time during the day, but the men were allowed one and a half hours off in a 12-hour day, and the headmen arranged the intervals of rest, which were not given at any particular time. Some men took their rest all at one-time but others halved it during the morning and afternoon. During the remainder of the year—*i. e.*, for about seven months—the mill was closed. The hours that the mill worked were arranged so as to keep pace with the supply of paddy, and the bulk of the work had to be completed by the beginning of May. All the paddy had to be milled with the exception of that placed in the godowns. The storing capacity of the mills varied, but his firm could store up to 5,000 tons. A restricted 12-hour day would adversely affect them during the month when they had to work up to 10 P. M, when the supply of paddy was too much for a 12-hour day, but not enough for all-day-and-night working. They could not always arrange for sufficient labour for all-day-and-night working, and the 10-P. M. day was essential in the rice mills. The paddy came down in rushes, and generally had to be milled at once, so that the men on occasions had to work for as long as they were willing to work. He considered that the 16 hour day was the limit of their capacity for working. The men liked the 16-hour day because they received from one and a half times up to double pay for the extra hours, and their health was not injured by working long hours for one month only. The Company employed a few tally boys in the compound. They received about Rs. 8 a month, and were from thirteen to fourteen years of age. He could not say whether these boys were examined by a medical man He regarded them as part of the outdoor staff. They were clerks, and did no manual labour of any kind. In the 16-hour day the men in the mill obtained two hours off. During the other fourteen hours the men who came under the Act had to attend to the machines. They did not leave the mill and loiter about. The outside workers did a 12-hour day, and rested for the remainder of the time. The starting pay of the millmen was Rs. 14, and this increased gradually. The average pay was Rs. 20, and the headmen earned Rs 50. The outdoor coolies earned from Re. 1-4 to Rs. 2-2 a day; the men who handled baskets, from Re. 1 to Re. 1-4 a day; and the bagcarriers, from Re. 1-8 to Rs. 2 a day. Witness had not made any attempt to check the actual working hours of these coolies. Witness considered that it was absolutely impracticable to build sufficient storing accommodation to store the paddy and so work an average 12-hour day all the year round. If the additional storing accommodation were available, it would not be impossible to work the 12-hours day; but in his opinion the buildings required would be too huge for practical purposes. If they stored the paddy there was the probability of it becoming damaged during the monsoon even though no rain should actually get at it. Paddy went off colour as soon as the temperature exceeded 112° Fahrenheit. The trade was carried on at present on the basis of a seasonal arrangement, and the trade would much prefer that this should continue. The growers of the paddy had no accommodation, and the millers could not provide sufficient storage. If the paddy was cut green it heated and would not keep. If paddy had to be stored for a considerable time, it would probably be necessary to have it dried, and the buildings carefully ventilated. Further, it would be impossible to finance all this paddy and to have so much capital locked up. Witness did not think that the larger quantity of the Maulmain paddy went to Calcutta. He could not say whether three crores of bags were exported from Burma. This year's crop amounted to two and a half million tons of rice, valued at roughly £7 a ton, and this represented too large an amount of rice to be stored. The millmen came from Chittagong, and the outside workers were Madrasis (Coringhis). Of the latter some stopped for years in Maulmain, but others returned to Madras when the season was over. The millmen were regular workers, and did not absent themselves. The Company never called on a day man, even in an emergency, to work the night shift also. In his experience the workers as a class had not deteriorated in physique, and they were a sturdy lot of men. They employed no Burmans, as they did not take to mill work. A few Burmese women at one time used to sew bags, but that was all. The men had no desire for cooly lines, as they all resided in the town. He thought each man paid eight annas a month as rent, sometimes six men would rent a house for Rs. 2 a month. All the lodging-houses were under Municipal regulations. Witness had never seen the Burmans working hard at agriculture, although they sometimes undertook light employment. Up in the far north the Burman might work harder. The proposed young persons class of youths from fourteen to eighteen years of age to work twelve hours a day would not affect the industry at all. Neither would it affect the industry if the mill compound was brought under the Act, provided there was no regulation concerning the length of hours. As the compound workers were in the open air, there seemed no reason for interfering with them. He would prefer to have no limit to the hours that the compound workers could work, as occasionally there was a rush of boats containing paddy, and these had to be cleared at once. If the compound was brought under the Act, it would probably be necessary to increase the latrine accommodation. *Oral evidence.*

WITNESS No. 204.

Mr. O. McGeorge, Manager of the Bombay-Burma Trading Corporation Maulmain.

Mr. McGeorge. *Oral evidence.*

Witness stated that he had had seventeen years' experience of saw mills in Rangoon and Maulmain. They employed in their Maulmain mill about three hundred and twenty hands, all adults. Children were not employed owing to the trouble of examination and of keeping a register. They had a few apprentices, but their minimum age would be about eighteen years. The hours of work were from 6 A.M. to 11 A.M. and from 12-30 P.M. to 5-30 P.M., and they never worked more than an extra half hour. The work was all done in open sheds. The leading hands were Burmans, but the ordinary coolies were Tamils and Telugus, while the engine-room staff were Chittagonians. The hands were paid by the month on the Saturday nearest to the 15th of the following month. There were not many absentees, and there was no necessity to provide extra hands for absenteeism. The average pay was about Rs. 14 a month, and the men were poorer in physique than the contract men employed by the rice mills. They were not required to lift or carry heavy weights, and the majority of the men could not work in the rice mills, as they were not up to the standard required there. No payment was made for the extra half hour worked occasionally. All the coolie work was done by Indian labour. The Burmans were trained in the saw mill and they seemed to have a natural inclination for timber work. They earned from Rs. 30 to Rs. 75 a month. A restricted 12-hour day would not effect them in the ordinary course, but there was the possibility that it might be injurious. The present Act had not hampered them in any way, except that witness considered that there was no necessity for the compensating holiday in the week when they worked on a Sunday, as a special occasion. As a matter of fact they had twice within his experience worked on Sundays without giving the compensating holiday. They could not give the holiday because they had not the extra staff with which to run the mill. On those two occasions it was to escape demurrage on steamers, as the vessels were waiting and the cargo had to be completed. They only worked on the Sundays then because it was necessary to give the extra day's work. Should a restricted 12-hour day be enforced, then there should be a special exemption for saw mills to allow overtime or work on Sunday to meet such a contingency as he had referred to. The number of Sundays on which it was permissible to work might be limited to a few in the year. As a rule they always gave the Sunday holiday, and in addition other holidays during the year. In 1907 the additional days were made up of two Christian, two Hindu, and eight Burmese holidays. Although they could not get all the hands they would like, yet they had not been seriously inconvenienced so far. In his opinion the saw mills did not get now quite so good a class of man as formerly; they did not appear to be so strong. The rate of wages had not increased. There were not so many timber mills as there used to be, but the rice mills had increased. He did not think that the Act should be made more onerous for the employer than it was at present. They were sufficiently inspected as it was. There were about three or four slight accidents a year in their mill, but an accident on the main saw bench was a very rare occurrence. The men were supplied with a special safety holder; but sometimes they did not use it, and most of the accidents were due to this neglect.

NOTE.—The witness did not submit written evidence.

Witness No. 205.

Mr. H. G. A. Leveson, I.C.S., District Magistrate, Rangoon, representing the Government of Burma.

Mr. Leveson. *Written evidence.*

There is no special factory inspection establishment in the Province. Factory administration is conducted by District Magistrates. Where local circumstances render it necessary, Sub-Divisional Officers have been appointed inspectors to assist the District Magistrate, and Civil Surgeons have generally speaking, been appointed (medical) joint inspectors. There being no special establishment, no system of recruitment or training is required. The present system has hitherto worked satisfactorily; and there is, so far as can be seen at present, no necessity to alter it. Labour conditions in the Province are not such as to require stringent measures to prevent sweating; there are no industries involving processes which call for special hygienic precautions, and land conditions are not such as to necessitate strict supervision with regard to over-crowding or ventilation. The present establishment is adequate for present needs. A consideration of the problems with regard to factory administration which have presented themselves in various parts of India, and of the fact that no such problems have arisen for solution in this Province, indicates that factory conditions in Burma are entirely different from those in, say, Calcutta or Bombay. It is therefore difficult to see any useful result whatever that would ensue from centralization of factory legislation. If it is found advisable to invest supreme control in India in the Department of Commerce and Industry, the Province of Burma should be specially exempt from such control. There would apparently be no objection to the deputation of an expert from that Department to visit the Province and advise the Local Government once in, say, ten years; but continuous and immediate control by the Department would simply mean waste of time and trouble. There is no need at present to employ whole-time medical inspectors of factories. Hygienic conditions in the factories are precisely the same as those outside: sanitary improvements can best be carried out in conjunction with, and as an integral part of, measures adopted for the whole neighbourhood; and as regards special processes involving unhealthy surroundings, no question has as yet arisen calling for special or expert advice. As no staff is required it is not necessary to deal with details as to duties, strength, recruitment, etc. No symptoms have been observed of the physique of workers having been affected by long hours, there is therefore no necessity to limit the working hours of adult males, and to do so would needlessly harass factory owners. If hours are to be limited they should be fixed at the maximum consistent with the reasons which lead to the conclusion that limitation is necessary. The only method of enforcement that suggests itself is the appointment of a special inspector to visit mills at or about the beginning and end of the legal working hours. There is no reason to suppose that persons between the ages of 12 and 14 are to any appreciable extent illegally employed as adults; no instances of physical deterioration of such persons have been observed either from illegal employment as adults or from any other cause; the creation, by law, of a special class of "young persons" with restricted working hours is therefore not required The creation of a special class of "young persons" is unnecessary, and the maintenance of a register of ages to facilitate enquiries would entail constant supervision and offer no corresponding advantages. No facts have been observed indicating any necessity to prohibit the employment of women by night. It is undesirable to raise the age at which children are allowed to work in factories. The work on which children are at present employed consists of—

(1) making up packets of candles in the Burma Oil Factory. The work is light, the working time sufficiently restricted; hygienic conditions are good, and the discipline maintained is excellent;

(2) in Mower & Co.'s rope works at Kamakasit, practically the children are allowed to play at working so as to be under their mothers' eyes. It is done in the open air and is entirely unobjectionable;

(3) miscellaneous light jobs in the mills, such as sweeping up shavings, removing empty baskets, etc. No strain of any kind is involved; actual employment is intermittent, and there appears to be no reason to apprehend unfavourable physical results.

Certificates of age are at present required and may be continued; there is no objection to requiring the addition of certificates of physical fitness, though present conditions show no indications that the latter are required. So far as this Province is concerned there appears to be no object in prescribing that certificates of age or physical fitness be procured before children who have hitherto worked half-time are allowed to work as adults. There appears to be no object in prescribing that children shall not be employed except in regular sets. There appears to be no object in prescribing that factory owners be obliged to provide elementary education. There appears to be no object in prescribing that children should be prohibited from accompanying workers to dangerous or unhealthy parts of factories. No sufficient reasons exist to prescribe analytical standards of purity for air. No sufficient reasons exist to prescribe analytical standards of moisture for air. No sufficient reasons exist to prescribe analytical standards of purity for water. There appears to be no objection to raising the standard of latrine accommodation to one seat *per* 25 workers or to the provision of separate urinal accommodation, but the necessity for either provision has not yet manifested itself.

As regards provision of exits in case of fire, no provision is required in the case of rooms where the bulk of the work is carried out, because, from the conditions of the work there, they are practically open to free egress. Where special masonry walls are erected round engine and boiler spaces to suit insurance requirements some such provision may occasionally be found advisable, but the legislation should be elastic, *e.g.*, by empowering Local Governments to make rules on the subject. The provisions of section 12 of the Act appear to be sufficiently stringent in the matter of fencing machinery. It is difficult to see any advantage likely to accrue by insisting on uniformity of practice throughout India in the administration of the Factory Act. Owing to the conditions of the labour market and the nature of the principal industries in Burma, it appears improbable that any serious evils would have grown up even if no Factory Act had ever been in force at all. It is not suggested that the present administration of the Act should be in any way relaxed, but it is suggested that the multiplication of rules and conditions, the necessity for which has not yet presented

Mr. Leveson.

itself, will detract the attention of owners from the few essential points now insisted on, namely, fencing of machinery, employment of children, and elementary sanitation. And it appears probable that the petty annoyance of being obliged to comply with detailed provisions, the object of which is not clear, will tend to induce owners to comply with the letter of the law and resist interference beyond the letter, instead of, as at present, showing a ready acquiescence in any suggestions made by the inspectors. If legislation on the lines suggested in the questions be found necessary, the employment of full-time inspectors will doubtless be required; but if the opinions expressed in the replies, that further legislation is not at present required, be approved, the present staff may be considered adequate. It has the advantage of consisting of officers of position whose moral influence as such is believed to be a valuable factor in the maintenance of suitable conditions, such as could hardly be expected from the members of a special staff of less imposing official status

Oral evidence.

Witness stated that there were approximately one hundred and eighty factories in Rangoon. Maulmain and Bassein were the other two large centres of industry in Burma. Witness was responsible for the whole of the inspection of the factories in Rangoon Town. He visited them once a year, with an additional visit to those factories where petroleum was refined. The Medical Joint Inspectors also visited twice a year. The same system of inspection was followed in Bassein. If it were considered necessary in India to withdraw the inspection duties from the Joint Medical Officers and to appoint whole-time inspectors, he did not think that the Government of Burma would offer any objection to that system being followed in Burma. The inspections at present overlapped. There was no procedure definitely laid down to insure that any defects in factories reported by the inspectors were in fact remedied. As a general rule, if any defects were reported, witness drew the attention of the manager to the points raised and required him to send an intimation within a given time that they had received attention. If no reply was received, then a further inspection was made. Witness considered that under the present system of inspecting there might be frequent breaks in the continuity of policy; one Deputy Commissioner might notice one thing and omit altogether another equally or more important factor The present system had its advantages, however, even though under it the law would not ordinarily be enforced in precisely the same manner in Rangoon, Maulmain, and Bassein. This was not a serious disadvantage, because there were not any very marked evils in connection with factory labour in Burma. The witness thought that there should be no restriction of adult working hours; but if the Commission recommended otherwise, then the Local Governments should be given power to grant exemptions. A 12-hour day would not adversely affect Burmese industries, because no employee at present worked twelve hours A fixed 6 A M to 6 P M. day would have an adverse effect, however. The state of the labour market was such that no employer of labourer could compel his hands to work for twelve hours. He had no direct evidence to prove that they did not work over twelve hours but at the same time he had never come across a case where they had. If the restricted day were enforced by law, it would be more logical to include the godown coolies in the restriction. These men, in his opinion, should come under the Act. With reference to this matter, he could only refer the Commission to the letter in the Manual of Rules and Order which issued in 1897 In consequence of the orders in that letter only those operatives who worked inside the mill in rice mills were considered as coming under the Act. It would not inconvenience owners if all the workers were brought within the scope of the Act Even when the mills worked a 16-hour day no man worked more than twelve hours, because extra hands were employed to make up for the longer day One could not of course, be absolutely certain that each individual man did not work over twelve hours. If a man was allowed to work for twelve hours a day that would not affect the rice mills. That is to say, it would not affect the rice mills if it were conceded that the requirements of the Act would be met by the employment of extra hands sufficient to make up for the extra hours. This would depend upon the actual wording of the clause. If it were laid down that each man must have a stated twelve hours period for work, then the rice industry would be effected. Such a regulation could not be worked in practice. It would be impossible to register labour in rice mills in such a manner as to show whether any particular man had worked over twelve hours, as the men moved, from mill to mill. They could make a contractor responsible for any evasion, but it would be as difficult to frame rules as to enforce them. In the rice mills there were very few children under fourteen years, and those who were employed did light work He had never observed any children carrying baskets from the boats to the godowns. No legislation was necessary on this point at present, though it might be advisable to be prepared to prevent young children from so working. The case discovered by the Commission was in his opinion a very exceptional occurrence. All the children in the Burma Oil Factory were certified, and worked in accordance with the Act The rice mills did not have a half hour stop between 12 noon and 2 P.M., and the owners would consider such a stoppage most inconvenient. He had taken the Act to mean that each coolie should have half an hour off, and, as a matter of fact, the question whether the factory should stop for half an hour had never been raised. The smaller mills did stop for half an hour, but there was no stoppage in the larger mills. No special breaches of the Act in Rangoon had ever been brought to his notice. On one occasion some children under fourteen years were employed without having been certified, and the owners insisted that the rope walk, where the children were, did not form part of the factory. Witness however thought differently. There had been no prosecutions in his time; if anything were found to be wrong the owners were given an opportunity to put it right. So far as witness knew, there had never been any attempt to improve the ventilation in rice mills, but he had never seen any harm result from this. His experience would not lead him to compel owners to make arrangements for remedying the dust nuisance in rice mills In 1907 there were seventy-seven accidents in the factories in Rangoon. A statement classifying these accidents is appended. Witness had seen one insanitary factory; he could not account for its condition being overlooked by the inspectors. No doubt there would be an improvement if the inspecting staff were enlarged, but there were just as insanitary areas in the town. He considered that the factory inspectors demanded a higher state of cleanliness in the factories than could be attained in the town. Witness considered that the inspection of coolie lines, and of their sanitary condition, fell within the duties of the inspector. He recollected a case when a man, who was wearing a loose coat instead of proper clothes, became entangled in the shafting of a saw mill. He considered that if operatives in saw mills adhered strictly to the rules, there would be very few accidents attributable to the lack of fencing. Witness called attention to defective fencing of machinery in places where outside coolies might go, but not in cases where the

mill machines proper were at work. He did not think that the proposed "young person" class, with hours limited to twelve, would adversely affect factory owners, though the contractors would consider it an additional complication. In practice it would not affect the supply of labour or the actual hours of work: he did not think that the proposal would, if introduced, lead to a strike. The shortage of labour was becoming more acute, and this might have the effect of introducing a younger class of labourers. He was of opinion that all the coolies in the compounds of rice mills should be included within the scope of the Act without any stipulation as to the length of their working day. If women were prohibited from working at night the mere enforcement of the rule would not affect industries in Burma, except in so far as it would introduce yet another complication. Witness found from enquiries that during the busy season the cleaning of engines and machinery is sometimes carried out on Sundays. The practice is not universal, but is not confined to Chinese mills. Thus in the Kanoungh Greek, on the 1st March 1903, of six mills shut down in which cleaning up was going on 2 were Chinese, 2 Burmese, and 2 European. As a rule the engines are stopped early on Saturdays, but when there is pressure of work they are kept going till late in the evening, and the cleaning up is put off till the following Sunday morning. Mr. Laverga.

Accidents in saw mills in 1907.

	Due to causes other than those connected with machinery.	Caused by machinery, coupled with proved carelessness, *i.e.*, not preventible by fencing.	Caused by machinery, and possibly preventible with improved fencing.	Caused by circular saws in motion, and possibly preventible by the use of saw guards.	Total.
Fatal	5	2	...	...	7
Severe	23	5	9		41
Slight	22	...	4	3	29
				Total	77

Witness No. 206.

Major O. Barry, I. M. S., Civil Surgeon, Rangoon.

Major C. Barry. *Written evidence.*

I would preface my remarks with the statement that my experience extends over a period of a little less than a year. During that period I have inspected chiefly rice mills, but also saw mills, iron foundries, printing presses, oil works and ice and soda factories. I am unable to supply any statistics showing the relative healthiness of these operatives as compared with the general average of the non-factory population, but have formed the opinion that their general health and physique is in no way worse than that of the average non-factory population. I am of opinion the average physique of the factory population is somewhat better than that of the general average of the same class, presumably due to the fact that they receive regular wages, which in Rangoon are high, and perform regular work in not unhealthy surroundings I have not found the operatives I am acquainted with to suffer from any specific classes of disease. As regards the most suitable and generally applicable method of determining the age of any particular examinee, I think the dentition test can be very generally relied on, but it should be combined with a consideration of the general physique of the examinee and of any other signs of maturity that may be present. As regards the average age at which the permanent teeth appear my experience has been as under—

	Years.
Central incisors	7 to 8
Lateral incisors	8 to 9
Canines	10 to 12
Anterior bicuspids	9 to 10
Posterior bicuspids	10 to 12
Anterior molars	7
Second molars	11 to 12
Posterior molars	14 to 20

No cases of attempts to evade the existing law as to the employment of children in factories have come to my notice. Children are very little employed in Rangoon factories. I do not think the amount of work entailed by the inspection of the factories is too heavy to be performed under the existing arrangements as far as the medical staff is concerned. Under existing arrangements the two Civil Surgeons of Rangoon divide the work between them. I consider the latrine accommodation of one seat to 25 persons suitable and sufficient, I wish to bring to the notice of the Commission the desirability of enforcing compulsory vaccination on those operatives who do not possess satisfactory vaccination marks. Severe epidemics of small-pox are not infrequent in Rangoon, and it has been my experience that a very large portion of the patients have been coolies from the factories; especially during the busy season of the rice mills, which commences shortly after the paddy crop has been reaped, a very large number of coolies arrive from India to work in the mills. These men are largely unvaccinated or unsuccessfully vaccinated, and are very prone to contract and spread small-pox. I have no statistics to prove this point, but believe the health officer of the Rangoon Municipality would be able to support the above statement by figures. My experience has been based on hospital experience in the infectious diseases hospital.

Major C. Barry. *Oral evidence.*

Witness stated that his experience of factory labour extended to about one year. He considered that the labourers in Rangoon were healthy and not subject to any special ailments. There was a great deal of dust in the rice mills, but they had never had any specially large number of lung-disease cases in the hospital. Witness had examined coolies to find out whether lung disease was prevalent, and had also asked the mill doctors, but there were no signs of any special frequency of such diseases among mill operatives. Witness had to pass young children for the Burma Oil Factory; a few children were also employed in the rice mills. As a rule these children were sent to his house for examination, but on some occasions children had been brought to him while he was making his inspection. There had not been any cases of children working without certificates, and he did not give the child of nine the benefit of the doubt. Witness had visited the Burma Oil Factory twice since March last, and in the last two months they had sent up two batches of children. Taking it broadly, he thought the new children came for inspection once every three months and perhaps 5 per cent. were rejected. Witness approved of compulsory vaccination. This might slightly affect the supply of coolies at first, but it would help in combating small-pox, which was epidemic among the Rangoon coolie class. Some of the coolie-lines were not very good; and if one spoke to the mill managers on the subject they replied that they wanted to drain the lines, but the Municipality would not supply sewers. The health officer objected to latrines over the creeks. With the exception of small-pox the coolies were a healthy class, and showed no signs of being overworked. He had watched boats unloading, and had never observed any young children carrying baskets of rice; but if this practice existed to any extent it should be stopped. His experience was that the dust in rice mills did not appear to be harmful as one would have expected, and no particular form of lung disease could be attributed to it. If the workers suffered from any complaint, there was the possibility that they would go first to a native doctor; but witness thought that, as a general rule, they came to the hospital. He received the ordinary fee for inspecting factories and a fee for examining each child, whether passed or not. He considered that the latrine accommodation should be increased; and, when calculating the number of latrines, all the workers in the mills should be included, whether they worked inside or outside. The latrine accommodation was not calculated on any definite basis at present. Roughly speaking, it was about one in fifty. This was not enough, though the overfilling of the receptacles might at times be due to the lack of efficient conservancy arrangements.

Witness No. 207.

Major J. Penny, I.M.S., Medical Joint Inspector of Factories, Rangoon.

Major J. Penny. *Written evidence.*

I am chiefly acquainted with operatives in rice mills, saw mills, and foundries. I regret I cannot supply statistics, but I am certainly of opinion that the health of the factory operatives compares very favourably with that of the general average of the non-factory population of the same class. In my opinion the physique of the factory population is above the general average of the same class, and I consider that factory operatives do not suffer more than the general population of the same class from any specific class of disease (unless, perhaps, small-pox and cholera). For the purpose of definitely limiting the ages for certain classes of factory workers I consider the dentition test to be the most reliable, but it should be coupled with the general physique, appearance, and other signs of maturity. In my opinion the average age at which the permanent teeth appear in India is as follows:—

	Years.		Years.
(a) Central incisor	7 to 8	*(e)* Posterior bicuspids	10 to 12
(b) Lateral incisors	8 to 9	*(f)* Anterior molars	7
(c) Canines	10 to 12	*(g)* Second molars	11 to 12
(d) Anterior bicuspids ...	9 to 10	*(h)* Posterior molars...	17 to 23

The existing law as to the employment of children in factories is not, I consider, as a rule evaded in Rangoon. Children are employed in very few of the factories In Burma I do not consider the appointment of whole-time medical inspectors necessary. Women and children are employed to an extremely small extent in the factories, and the existing arrangements under which the two Civil Surgeons do the medical inspections are, I consider, quite sufficient. The standard suggested by the Textile Factory Labour Committee, *viz.*, one latrine seat for every twenty-five persons, is, I consider, suitable and sufficient.

Oral evidence.

Witness stated that he had had rather more than one year's experience of inspecting work in Rangoon; five years ago he was in Maulmain for six months. There was no deterioration in the health of the operatives due to factory work, and he did not think that the rice dust gave rise to any special ailments. He considered that the mill hands were as good, if not better, in physique than the outside population, with the exception of the dock labourers. Witness had to inspect all the factories on the south side of the river. He visited each factory in the course of the year, and inspected some twice and some three times during the year. Children were employed in the Irrawaddy Foundry and Mower's Rope Factory. They were all passed as of proper age. He had visited the rope factory to see that no underage children were employed, and also made a general inspection. On one occasion he saw children in a closed off space whom he considered to be under nine years They were helping their mothers, and were not doing regular work. He then thought it had been held that if owners liked to shut off such a place from the rest of the factory by a distinct fence, the children could be allowed to stay there. He had since been informed that any such place must be regarded as part of the factory.

WITNESS No. 208.

Mr. W. F. S. Perry, M.I.M.E., Rangoon.

I am the mill manager of the Bombay-Burma Trading Corporation's saw mills in Rangoon. There are two— Mr. W. F. S. Perry. *Written evidence.*

Dunneedaw Mill, 758 males, no women, and no children under the age of about fourteen.

Dallah Mill, 317 males, no women, and no children under the age of about fourteen.

To my knowledge neither of the above mills have worked over twelve and a half hours a day during the past nineteen years. I consider the working hours for adult males should be limited to twelve. I think the physique of the coolies who have, so to speak, grown up in our mills shows an improvement. Our longest hours are from 6 A.M. to 10-30 A.M. and 11-30 A.M. to 6 P.M., total eleven hours. I consider these are satisfactory hours. On Saturdays the mills close at 4 P.M. I think a stoppage at noon would be too late; I recommend a stoppage from 10-30 A.M. to 11-30 A.M. The creation of a special class of workers corresponding to "young persons" under the English Act is not required for our mills. I do not think it desirable to employ youths who are evidently too young to do manual labour, and am not in favour of a special register for "young persons" It is impossible to arrive at the age of boys of the cooly class, and I would therefore fix no definite age limit, but leave it to the discretion of mill managers to decide as to the fitness or otherwise of boys for manual work. The factory inspector should have power to prohibit from working any person he may consider unfit. I do not see the necessity for raising the standard of latrine accommodation to one seat for every twenty-five workmen; nor do I advocate separate urinal accommodation. Further precautions for the fencing of machinery in the Corporation's mills are unnecessary. No arrangements for the administration of the Factory Act, which might suit one province or district, would necessarily be applicable to others. I consider full-time medical inspectors for saw mills unnecessary. In the Corporation's mills varying the length of the working days would affect the outturn in direct ratio to the time worked. I am not in favour of employing children on half-time in saw mills. For the reasons given by me above, I do not consider certificates of physical fitness necessary. I think saw mill owners would object to employing children or "young persons" on less than full time. We employ only a small number of so-called young persons; their pay is Rs. 8 *per mensem*, and rather than have the work interfered with, we would employ adult coolies at Rs. 12 *per mensem*. The number of young persons in our saw mills between the age of, say, fourteen to sixteen, is about twenty-eight.

Subject to a restriction of the working hours of adult persons it would be preferable to fix a maximum number of hours, leaving it to the discretion of each individual employer to settle the time for the commencement and the termination of the day's work. I think it would be a pity to restrict the employment of youths in our mills. The work is not hard; they lead a healthy and happy life, and develop into a better class of labourers than the ordinary cooly. Many of our best coolies and sawyers have been with us, except for intervals when they go to their country, since the time they first commenced as sawdust boys, and have, so to speak, been brought up in our mills. I think the fencing of sawing machinery demands exceptional treatment, so as not to interfere with the economical and efficient working of the same. I do not consider that inspectors need necessarily be obtained from the United Kingdom for factory work in India. The conditions are entirely different; but whether obtained from home or locally, the inspector must be above suspicion I think there should be elasticity in the operation of any new laws in connection with the present Factory Act. I would suggest that special provisions be made to meet exceptional cases, and that rules for dealing with the same be drawn up in consultation with owners or managers of such factories. Factory hands should be housed as near as possible to the factory in which they work, and I think that Government should encourage this by making land available at reasonable rates wherever possible, so that factory owners may be able to provide accommodation for their work people.

Witness stated that he had had nineteen years' experience of the timber trade in Rangoon and Maulmain. He had also been twice at Bangkok for short periods. He only employed adult labourers. The mill was stopped every day from 10-30 A.M. to 11-30 A.M. The point as to whether they ought not to close between 12 noon to 2 P.M. had been raised, but they had not been compelled to observe the letter of the law in this respect. There was no scarcity of hands with the exception of some slight difficulty in November and December. Nearly all the coolie labour was obtained from Madras; the fitters were Bengalis and Burmans; and the enginemen, Chittagonians. The attraction of the saw mill was that it afforded constant employment, and a large number of the men stayed on for many years. About every third year they took a long holiday. There was no absenteeism among the regular hands. In fact, they would not keep men who absented themselves at all frequently. In a mill with eight hundred men they might have twenty absentees a day, or 2½ per cent. A native doctor looked after this and if the men were absent without cause they were fined The adults in the saw mills did not work twelve hours, so the proposed "young persons" class would not affect the timber trade. Witness thought that in saw mills the hours of labour should be restricted to twelve a day. He approved of a fixed legal day of twelve hours for all industries, for if a man worked for any length of time beyond that limit he must suffer injury to his health. He had not seen any deterioration in health; but it was his opinion, based on general grounds, that a man should not work more than twelve hours a day. At present they had no guards for the saws, and he thought it impossible to provide guards owing to the rough, unshapely, and irregular timber that had to be cut. He did not think that the guards used in England would be suitable for India, owing to the rough character of the timber here. He could not remember any accident occurring owing to a person falling on top of a saw, but there had been accidents caused by a back-throw. This had happened perhaps eight times in his experience, and on one occasion with fatal results. He remembered three fatal accidents altogether, but speaking generally there had been very few accidents. He thought that the fixing of saw guards would be detrimental to their work. He had never seen such guards in use. The accidents to the fingers and hands were always on the very small saws, *Oral evidence.*

Mr. W. F. S. Perry.

but owing to the provision of safety holders these accidents had become much rarer. All the shafting was overhead except one or two unimportant cases. He was in favour of housing the hands near the mills. The Corporation provided free quarters for more than half their eight hundred hands. The coolies lived in barracks; the *durwans* in double-storeyed barracks, and the clerks and Burmans in private rooms. This made the labour-supply much steadier. The coolie barrack consisted of one large room, and each man had plenty of space. Personally, he should like to be in a position to house all their hands, but land had now become very dear. Government asked an altogether prohibitive price, and at the same time laid down impossible restrictions. The coolies were given fuel and were provided with cooks and sweepers, and these privileges acted as an inducement to them to live on the premises. Witness would like the Commission to recommend that Local Governments should grant facilities to mill-owners by providing land for such purposes. All employers of labour should be encouraged in this manner, as it would prevent overcrowding and help to solve the housing problem. It was not his opinion that coolie labour was becoming scarcer year by year. The rates of pay had not increased for the last nineteen years The ordinary coolie earned Rs. 12, and the saw coolies obtained more. Compared with fifteen years ago he could see no decline in the standard of physique of the worker, but he thought that when they engaged new labour now they got a larger proportion of old men. He had noticed this in recent years. Their longest day was up to 6 P. M. Saw mill labourers did not earn such good wages as the mill men, but the former had the advantage of being in constant employment. Their workers took a good meal in the interval between 10-30 A.M. and 11-30 A.M. His objection to the "young persons" class was based on the assumption that they would be allowed to work fewer hours than the other workers in the mill. In any event, it would complicate further the working of the mill.

NOTE.—As Mr. Perry left Burma shortly after the Commission's visit, the abstract of the oral evidence could not be verified.

WITNESS No. 209.

Mr. John Scott, Assistant Manager, Messrs Steel Brothers & Co., Ltd., Rangoon.

Mr. John Scott. *Written evidence.*

I represent Steel Brothers & Co., Ltd., whose factories are—

	Poozoondaung		Kanounghto.	Dunnedaw.
	Lower Mill Rice.	Upper Mill. Rice	Rice.	Timber.
Men employed ...	270	200	210	550
Women ...	...	...	...	...
Children ...	...	...	...	...

With regard to the rice mills, the numbers of operatives stated are for day work only. When the mills are running day and night the number of operatives is approximately doubled The above figures, too, do not include coolies working in godowns attached to mills, landing and shipping. This work is usually paid by piece work. I am unable to give the figures for the last ten years, but on an average for the last three years each of these factories has worked over twelve and a half hours a day in each year as follows:—

Lower Mill Rice.	Upper Mill. Rice.	Kanounghto. Rice.	Dunnedaw. Timber.
60 days	70 days	60 days	...

During the busy season (roughly two months) our rice mills work day and night and are provided with full double staffs The average daily number of hours has been for each year during that 3 year period:—

Lower Mill. Rice.	Upper Mill. Rice	Kanounghto. Rice.	Dunnedaw Timber.
11 hours	11·3 hours	11·3 hours	...

These figures apply to *working days* (Sunday being a holiday) and do not include days on which the mills were shut down altogether. Working hours of adult males should be limited. As far as my knowledge and experience go physique has not deteriorated. In my opinion a twelve hours working day should be fixed with a sufficient time allowance for meals. This is the rule in our factories. Where shifts are not provided for, I consider it would be desirable to limit the working hours to twelve, not necessarily between any specified hours. Similarly the engine should be stopped for at least half an hour during the day, not necessarily between 12 noon and 2 P.M., to provide time for meals Our saw mill works from daylight to dark (roughly twelve to thirteen hours according to season) with an interval of one and a half hour for meals In factories working on the day-shift system I see no necessity to fix specified legal working hours It should be sufficient to provide that no adult male should work for more than twelve out of every twenty-four hours. I have no experience of the result of illegal employment as adults of persons between the ages of twelve and fourteen. We do not employ children or half timers in any of our factories. We do not employ women in our factories I see no reason, however, to prohibit their working at night. I do not consider any steps need be taken to prescribe a standard of ventilation, etc. In my experience the factories in Burma are sufficiently well ventilated. The present standard of latrine accommodation, *viz.*, one seat for every fifty workers, I consider adequate. There is no need, in my opinion, to provide separate urinal accommodation. It would be desirable that all doors of working rooms should be hung so as to open readily from the inside outwards in case of fire. In our saw

mill we have no doors, and very few in our rice mills. No further precautions for fencing machinery are I consider necessary as regards rice and saw mills. I have no experience of any other class of factory. Conditions vary with the class of factory worked, and in my opinion it would not be practicable to secure uniformity in the administration of the Factory Act throughout India. As far as factories in Burma are concerned there is no need, as far as I can see, to appoint full-time medical inspectors of factories to assist the present inspectors. The production of rice mills *per* working day is more or less a steady one, but varies according to the quality of rice that is milled. Statistics might be supplied giving, roughly, the hourly or daily production of the different qualities of rice from, say, an average sized cone or huller, but I assume this information would not be of service to the Commission. Assuming that it is eventually decided to restrict the hours of adult labour, I consider it would be preferable to fix a maximum number of hours, leaving it to the discretion of each individual employer to settle the time for the commencement and the termination of the day's work. It appears to me nothing would be gained by obtaining inspectors from the United Kingdom for factory work in India Similarly, I do not consider it necessary that factory inspectors should in future receive a considerable portion of their training in England. I consider the present system of inspection sufficient to safeguard the welfare of the employés. Mr. John Scott

Witness stated that the hours in their rice mills were the same as the hours in the other mills; extra hours were paid for at the daily rate He considered that no adult should work over twelve hours a day and even in their 12-hour day they employed one third extra staff over and above the number required for the ordinary running of the mill. He called that a shift system, in that the men relieved themselves, but the rest periods were not ascertainable. If an inspector came at any particular time there would be no books to show what men were actually at work. They calculated the number of extra hands required on the basis of one half hour off for every man in twelve hours, but each man obtained more than this actual half hour. They had about two hours off altogether. A similar procedure was followed for night working. He was in favour of a 12-hour day in the event of their being allowed to continue the simultaneous shift system, but he was not in favour of a strictly defined 12-hour day if they had to have definite shifts. They did not wish to stop their mill at midday. During February and March a ½-hour stoppage would mean a serious loss of time the loss as affecting milling results would not be so important. The question of half an hour's stoppage between 12 noon and 2 P. M required by law had not been raised to his knowledge. It did not apply to factories where shifts were in force. He had seen one or two children occasionally handling paddy in the contract gangs, but there was no growing tendency to employ young children on this work. During the last few years the supply of coolies appeared to be decreasing, but they relied upon the contractors. The scarcity was probably due to the extension of the industry. The earning power of the men was increasing, and they made no complaints. In those mills which ran for the greater part of the year labour was stationary, but in the mills which closed after three months' work there would be new labourers every year. Paddy was not stored in order to lengthen the season. Millers wished to mill the paddy as quickly as possible, and the operations of the middlemen did not affect the market in regard to the expediting of supplies. Some mills worked for ten months in the year and some for only three. This was explained by the fact that where a firm owned, say, three or four mills all would work during the busy season; then, as the paddy supply diminished, they would be closed down one by one, but there would always be sufficient paddy coming in to keep one mill of the groups at work for the ten months. A few small mills worked intermittently all the year round As a rule the same body of coolies came year after year, and there had been no deterioration of their physique as a class. *Oral evidence.*

Witness No. 210.

Maung Po Ta, Rangoon. Maung Po Ta. *Written evidence*

I represent:—

(*a*) Maung Po Ta's rice mill.

(*b*) Maung Po Yee's rice mill.

(*c*) Ma Le's rice mill.

(*d*) Maung Po Ta and Maung Po Yee's rice mill.

No women or children are employed at these mills. There are seventy-five men in (*a*), seventy men in (*b*), thirty men in (*c*), and sixty men in (*d*). These factories work night and day for about six months in each year, and only in the day for the remaining part of the year. I would recommend twelve hours a day be fixed as the legal working day, from 6 A.M. to 6 P.M. I do not approve of factory inspectors being obtained from the United Kingdom. As the present Act is working very well, I don't think it is necessary to introduce any new law or regulation. I would suggest that all factory hands be housed in clean houses near their place of business, as all the rice mills do at present. I would fix a limit to the working day, say twelve hours, because I know from experience that the men can work without trouble for twelve hours. I prefer 6 A.M. to 6 P.M. I have tried this and it has worked well. In rice mills it will be most inconvenient to stop the engine and machinery in the course of milling. So far as the mills I represent are concerned, I can say that there is plenty of ventilation and they are quite sanitary, and as the present system is working very well, I don't think it is necessary to make any alteration.

Witness stated that he had had fifteen years' experience of the rice industry. He managed two mills which worked day and night for six months and a 12-hour day for six months. For three months of the latter six months they worked up to 9 P.M. This was in September, October and November. The men were paid extra for this overtime. Witness approved of the hours being restricted to twelve; when they wanted to work late they could employ an extra shift. It would also be possible for them to work day and night for one month instead of for three months up to *Oral evidence.*

Maung Po Ts.

9 P.M. Owing to the extension of the industry there was a shortage of coolies. The labour contractor was bound by contract and if he failed to supply the coolies then outside men were obtained by the Company and the contractor debited with their wages. They did not stop for the midday half hour, and if they had to do so it would mean a great loss in grain; perhaps fifty bags would be spoiled. He could not control the contract labour, where they sometimes saw children carrying paddy bags These boys, however, were not overworked They generally stopped on Sundays but if they worked they gave the compensating holiday, and in addition to that they closed for three days every fortnight for boiler-cleaning The small mills had only one boiler, but the larger mills had spare boilers The lowest rate of pay among the Chittagonians was Rs 14, and the rates went up to Rs 50 a month. They could get plenty of these men, but the Madras coolies were scarce. The mill stopped working for two months in the year, but all the Chittagonians were retained. They generally worked for four years before taking a long holiday. Out of their fourteen rupees it cost them from five to eight to live, and they remitted the remainder through the post office. They all saved money. The mill men did not waste money in drink. They lived alone, their wives and families being in their own country. The Tamils spent more money in drink than the Coringhees, but the Madras coolie also sent some money home Witness had never seen any cases of illness which could be attributed to breathing the dust in the rice mills.

Witness No. 211.

Yeo Poon Hwat, Rangoon.

Yeo Poon Hwat. *Written evidence.*

The factory I represent employs 110 coolies, of whom 100 are males and ten females. No children are employed. There is no record for the last ten years in my factory, but it worked about 270 days only in each year within these ten years and the average daily number of hours has been ten hours only. There is no objection to the limited hours for young persons aged fourteen to sixteen, provided that the number should not be more than five. It is unnecessary to fix definite time limits for the employment of adult male operatives. The present arrangement is satisfactory. If any new law is introduced in Burma, rice factories should be exempted because of the scarcity of labour. Coolies are obtained only by giving them advances, and even then sometimes they run away and take advances from others.

Oral evidence.

Witness stated that his firm had two rice factories on the Kanounghto Creek, but only one of them was now working. There were sixty hands inside the mill, and they worked day and night in shifts of thirty each. There were three hundred to four hundred outside coolies The mill worked twenty-four hours for three and a half months; by day only for six and a half months, and it was closed for the other two months. Just occasionally, on one or two days in the year, they worked up to 9 P.M. The hands earned from Rs. 16 to Rs. 45, and in the course of the twelve hours work they had two hours off. They employed one extra hand for every five or six men. They always closed from 2 P.M. on Saturdays to 6 P.M on Sundays They had three boilers which were separately used, and cleaned in alternate weeks. The firm gave advances to the coolie *mistris* and to the monthly servants. Sometimes the latter ran away, but the advances were recovered if possible, from their new mill. Sometimes boys of fourteen years helped in carrying paddy, but they never worked at night.

Witness No. 212.

Mr. W. Smidt, Assistant with Messrs. Mohr Brothers & Co., Limited, Rangoon.

Mr. W. Smidt. *Written evidence.*

I represent eight rice mills which the firm is working in Rangoon, Akyab, Bassein, and Maulmain. We employ from one hundred to six hundred men in the different mills, and up to twenty women. It is a rule to work our mills day and night during January, February, and March, stopping on Saturdays at 12 noon for small repairs and commencing again on Monday early. The remainder of the year we work day time only, *i.e.*, 6 A.M. to 6 P.M. Saturday is a half day; on Sunday there is no milling. The working hours of adults ought to be limited in rice mills, where the men work in hot and dusty places, which cannot quite be prevented. Legal working hours should not be fixed, provided that no adults work more than twelve out of the twenty-four hours They should be allowed an hour and a half off at midday or midnight, which time should be taken in turn, as it would not do to stop the engine, entailing loss of valuable time and causing a poorer result Should overtime be necessary, this should be limited to four additional hours and the men should be let off for half an hour. The men should be paid one and a half times their ordinary wages for any overtime. Milling on Sundays should not be allowed, as is done by Chinese mills depriving the men of a free Sunday afternoon. Weekly repairs should be attended to on Saturday afternoon and Sunday mornings if necessity arises, but all men should be let off on Sundays after 10-30, the breakfast hour There is no work for children in rice mills; women should only be employed for sewing bags, parting rice, etc., not for unhealthy work like carrying paddy into hoppers or work in the mill itself, which is of a more dangerous nature. An attempt should be made to prescribe a standard of purity for air in mills, securing better ventilation and dust catching arrangements. Latrine accommodation should be raised. If one seat is not provided for every twenty-five workers, it should anyhow be within easy reach of all houses, several latrines being distributed over the compound, and not, as at present, one water latrine for the whole place. Of course this would entail better conservancy arrangements on the part of the Municipality. At present far-away places like Upper Poozoodoung are not served at all. Separate urinal accommodation should be insisted upon. Further precautions for fencing machinery might well be insisted on, and all mills should have outside fire-escapes owing to the rapidity with which fire spreads in rice mills. Housing of factory hands is generally poor as regards space allotted to each man, and there are not always sufficient open spaces between the houses. Houses with iron roofs should have a ceiling, as the night staff has to sleep there in the heat of the day. The land

should be raised to high-water level and pathways should be made. Full-time inspectors should be appointed to secure due observance of any Acts that may be passed. It would be good if the inspectors had their training in England and knew what places should be like I consider it, however, essential that any law that may be introduced should have a considerable amount of elasticity owing to the different conditions prevailing. For instance, the great difference in the physique of workers in India. What is easy work to one race is often hard to another, and it takes time, in Burma especially, to import and train the right kind of men. Mr. W. Smidt.

Witness stated that he had had ten years' experience in the Rangoon rice industry All the mills did not work similar hours, and some did not work at night Occasionally they might work for a fortnight up to 10 P.M., and the men then arranged their intervals of rest themselves If a 12-hour day were enforced, then the rice industry should be allowed an exemption for this special overtime working. He did not think that any man actually did more than ten hours' work. The half hours stoppage between 12 noon to 2 P.M. was not observed in Rangoon, and if observed it would mean a great loss of grain, as when the mill was started the first hundred to two hundred bags were always spoiled, and had to be milled again The small mills might not be so particular, but even they would have to re-mill some bags. The men worked in gangs of eight, six at work and two off. The proportion was followed throughout the mills, so that they employed 33 per cent extra hands to allow for absences and rest. All the hands were present at the commencement of work in order to get their names registered, but very shortly afterwards they began to go out The mill hands were paid once a month, and they had never asked for more frequent payments. The contractors were paid weekly. There was no tendency on the part of mills to "crib" time except on Sunday mornings, as there was more paddy landed than there used to be. If occasion arose for overtime working, he should like to be allowed to do so. They did not work the 16-hour day last year or this year. When the 16-hour day was worked the men should be paid extra. He thought that his views in his written evidence would be acceptable to the other mills, and his proposals would enforce uniformity in working. Rice-mill work was unhealthy, and no man should do more then twelve hours of actual work a day. There must be a provision made for overtime working, because mills could not work double shifts at a day's notice. There was a certain amount of danger in rice-mill work, and it was not a healthy occupation. Witness did not object to women being prohibited from working at night, but considered that such a prohibition would be hard on the Burmese community. There was no special sickness amongst the workers which could be attributed to their work. There had been complaints, however, that some of the hands suffered from bronchial complaints, and the hopper *mistris* complained that the hoppermen were subject to fever. They had introduced fans in order to remedy the dust evil, but the fans required improving The general introduction of fans would be difficult and expensive. Witness approved of all the outside hands being brought under the Act. Young children should be prevented from carrying heavy baskets. He did not object to the "young persons" class; they should not be allowed to work beyond twelve hours He has never heard any one object to the husks being thrown into the river. Should the hours be restricted, they could only control their own mill men, and not the contract labour. Only the particular *mistri* in charge of a gang could say whether the men had worked twelve hours or not. The river bank was part of the mill premises. There had been no physical deterioration, and he had had men working in the factory for many years without bad effects. *Oral evidence.*

Witness No. 213.

The Manager of Munshi Murad Bux's mill.

The mill belongs to my father, Hajee Munshi Murad Bux, now in India. The number of men employed averages 45 daily. There are no women or children, the mill has not worked over twelve and a half hours The average is nine to ten hours, except on holidays and Sundays. The working hours of adult males should not be limited. I do not see any physical deterioration, as the men worked with satisfaction. No child is employed in the mill I am in charge of. No sick adult is allowed to work in this mill till he is certified as fit for work. *Written evidence.*

Witness stated that their hours of work were from 6 A.M. to 10 A.M., and from 12 noon to 5-30 P.M. He had no objection to a fixed 12-hour day, because they never worked over twelve hours even their longest day No children were employed in the mill, and there was no scarcity of coolies at present, as they had had to restrict their work on account of the creek closing up. Witness had had twenty-five years' experience in the saw mills, and during that time there had never been any accidents. There was no actual work on Sundays; but all the hands attended until 10 to clean the machinery, and this work was included in the monthly wage. If they cleaned up on Saturday afternoon it would mean a loss. It had always been the practice to clean up on Sunday mornings. If any order came in then, they would not execute it. He could not say whether the larger mills called their workers in on Sundays. They housed all their hands in coolie-lines, and the Madras coolies took their holidays when they liked. The rate of pay was Rs 14, of which they spent from Rs. 5 to Rs. 6. They all sent some money home. *Oral evidence*

Witness No. 214.

Mr. P. C. Mactaggart, of Messrs. Bulloch Bros. & Co., Ltd., Rangoon.

I would preface my replies with the remark that they are based solely on my knowledge of the conditions prevailing in rice mills. I have no experience of any other class of factory. My firm Mr. P. C. Mactaggart. *Written evidence.*

Mr. P. C. Mactaggart. owns and works four rice mills in Rangoon. The following is the number of hands employed in each on day and day and night work:—

	Men.			Men.	
	Day.	Day and night.		Day.	Day and Night.
Lower Poozoondoung ...	98	185	Kemmendine ...	63	102
Upper Poozoondoung ...	36	72	Kanounghto ...	46	83

N. B.—No women or children are employed.

During the last ten years the above mills have worked as under—

	Number of Days over Twelve and a Half Hours.									
	1898.	8899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.
Lower Poozoondoung ...	85	19	39	...	16	85	108	95	47	85
Upper Poozoondoung ...	78	73	66	161	90	77	115	96	100	69
Kemmendine ...	82	66	66	118	71	69	43	71	...	11
Kanounghto ...	...	...	...	...	...	...	...	...	69	59

	Average Daily Number of Hours.									
	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.
Lower Poozoondoung ...	8 31	4·93	6·00	...	4·39	7·90	9 48	10·06	5 32	8 12
Upper Poozoondoung ...	10·40	9·00	8·74	13·52	10·12	9 74	11·23	9·75	9·74	5·8 0
Kemmendine ...	9·51	7·35	7·52	10 38	8 13	7·25	7·41	7·44	1·66	3·45
Kanounghto ...	...	...	...	...	...	...	...	...	6·21	6·50

N. B.—Kanounghto mill bought by us in 1906.

The majority of the questions asked apply to textile industries rather than to rice mills and the conditions under which the hands work are so widely different that any comparison is difficult I do not think it necessary that factory inspectors should be obtained from home, or that it is even necessary they should obtain a training in England. It is in my opinion more essential that they should thoroughly understand the native worker and his ways of thinking and local conditions, than have any high technical knowledge of different industries I do not consider it necessary to limit the working hours of adult males in rice mills, as the work involves no severe and concentrated strain either physical or mental. I have not noticed that the physique of the workers has been affected by long hours, nor have I ever heard complaints on this score from the workers.

If hours are to be limited, I would recommend fixing twelve and half hours as a day's work when shifts are not employed With regard to enforcing the restriction, I do not consider it necessary to lay down hard and fast rules as to the hours of work; but if this has to be done, I would advocate—

(1) that the legal hours be from 5-30 A.M. to 6 P.M.

(2) that the engine should be stopped for half an hour between noon and 2 P.M.

(3) that when working on the day-shift system, the legal working hours should be from 5 A.M. to 10 P.M., provided that no adult male should work for more than twelve out of every twenty-four hours. I do not think it necessary to makes rules about ventilation in rice mills. They have rarely any inside partitions or walls, and are open to the air on all sides. The standard of latrine accommodation might be fixed at one seat for every twenty-five workers. Separate urinal accommodation is unnecessary. I do not consider that further precautions for fencing machinery are necessary. In a country the size of India and Burma, where so many different classes of factories and different races of workers are concerned, I do not think that uniformity in the administration of the Factory Act is practicable. If one set of rules is to be framed for the whole country, much latitude would have to be left to the local authority, and through it to the factory inspectors, in the application of the rules.

Oral evidence. Witness stated that he had had twenty years' experience of the rice industry in Burma. His Company controlled four mills. In addition to the hands mentioned in his written evidence, they employed in the busy season over three thousand workers in the compounds All the four mills would be at work when the season was at its height, but when the supply of paddy decreased they would close two or three of the mills. One mill would work for about ten months in the year and be entirely closed for the remaining two months. In the ten months mill, they worked a 24-hour day last year for eighty-five days. Occasionally, before going on to the 24-hour working, if they were pressed they would work up to 10 P.M., but this did not happen often. It might go on for about twenty days. For the remainder of the time they worked from 6 A.M. to 6 P.M. There were more mills in Maulmain in proportion to the supply of paddy than in Rangoon, and this accounted, for the difference in the length of the seasons. The question of storing accommodation had nothing to do with the matter. The fact was that Rangoon had a much larger supply of paddy to deal with. During the monsoon all the paddy up country was stored by the traders and brokers. The coolies did not object to work the 16-hour day, and whenever this was necessary they employed extra hands. The extra hours in the 16-hour day, as compared with the 6 A.M. to 6 P.M. day, did not mean that each man worked these extra four hours; but at the same time the number of hours actually worked was not ascertainable. A restricted 12-hour day would affect them during the period when they wanted to work up to 10 P.M. In his opinion the provision of extra hands constituted a shift. If a 12-hour day were enforced, then the engines ought to stop for a short interval. He did not favour this stoppage, which would inconvenience mill work and cause a loss in grain. They always shut down at noon on Saturdays, and began again at midnight on Sunday. Saturday afternoon was

utilised in cleaning and repairing, and Sunday was a holiday. Some of the native mills worked on Sundays, but it was possible they gave the compensating holiday in the week. The custom of the Sunday holiday was enforced when witness came to Burma. A few children assisted in carrying paddy from the boats, and some of them were under-sized; all over Burma they would find children doing similar work. None of the coolies in the godowns were under the Act, and they could not very well be brought under it, because the paddy was brought and landed in according to the tides, and the boats have to be cleared. So long as there was no restriction of hours it would not injuriously affect the industry if these coolies were brought under the Act. Even if a 12-hour day were enforced he knew of no practicable system of checking whether any particular man had worked twelve hours or not. No European at the mill was capable of telling whether a man had worked over twelve hours or not, and such a restriction could only be enforced with the very greatest difficulty. The work of unloading and loading was done entirely by contract. One day there would not be a boat at the bank, and the next day there would be several hundreds of coolies at work. These coolies went from mill to mill day by day, and their hour for starting and concluding work depended largely on the tide and the way the boats came in. They could not have a fixed day. The hours of the mill were not the hours of the paddy hands. Some mills had introduced fans in order to lessen the dust-nuisance, but much depended on the style of building. The presence of fans made a great improvement; and as it was to the interest of the employers to introduce them, he did not consider that there was any urgent need for legislation on the subject. He knew of no special diseases amongst either the hands or the European staff owing to the dust-nuisance. The rice mills were obtaining the same class of labour now as in former years; the rates of pay for those who handled the paddy had increased. There had also been a slight and gradual increase in the wages of the permanent mill hands. There were no abuses in the factories in Burma which called for any alterations in the existing Act. He saw no objection to latrines being placed over the creeks. The paddy husks were washed out to sea; they then rotted and sank. Extra men were always employed in the mills, so that the hands had an informal shift system among themselves. This obviated the necessity for any midday stoppage.

Mr. P. C. Mactaggart.

Witness No. 215.

Mr. A. Campbell, works manager of the Burma Oil Works, Dunneedaw, Rangoon.

Mr. A. Campbell.

Written evidence.

I represent the Burma Oil Company, Limited, Syriam and Dunneedaw refineries—

	Syriam.	Dunneedaw.
Men employed, about	4,000	1,200
Women* employed, about	100	...
Children† employed, about	500	...

* Engaged by contractors and paid by piecework } Employed in connection with the
† Includes about 100 under 14 years of age } packing of candles.

The process of manufacture is continuous. The tin factories work in the day time only 6 A.M. till 10 A.M. and 11-30 A.M. till 5-30 P. M., the candle factories work day and night—two shifts working ten hours each. No proper comparison can be drawn between these refineries and jute, cotton, rice, etc., mills. The process of manufacture is continuous and necessitates a large variety of skilled and unskilled labour. Work in tin factories and candle factories is constant, and the latter gives employment to a number of women and children. All employes apparently fully appreciate the conditions under which they work, the accommodation provided, and the wages. During the eighteen years I have been connected with these refineries I have frequently noted the contentment of the men with the steady employment here. Numbers have remained in this employment for periods exceeding twenty years. Children and women are employed in accordance with the Factory Act. I would suggest that the Company's medical officers be permitted to examine employees as to fitness. As it is the Company's medical officers are constantly in attendance at the refineries. I do not think it necessary to alter the existing law so as to create a class of young persons. As far as oil refineries are concerned, working hours must be settled by each employer. It is quite unnecessary to obtain factory isnpectors from the United Kingdom. Any new and more stringent law should contain provisions of an elastic character. It is quite unnecessary to limit the hours of adult males; their health is certainly not affected by working ten to twelve hours daily. A special register for workers under 16 is not necessary; the time sheets show attendance. The minimum age for children should not be raised; these children are better to be employed. I consider the present system of medical examination quite efficient. The medical officers should certify children as over 14 before they are allowed to work as adults. It need not be prescribed by law that children shall not be employed except in regular sets. Factory owners should not be obliged to provide elementary education at their own expense for children working in their factories. A rule should be made prohibiting non-working young children from accompanying workers to dangerous or unhealthy parts of factories. The standard of latrine accommodation should be raised to one seat for every 25 workers, and the provision of separate urinal accommodation should be insisted on. It should be prescribed that all doors of working rooms shall be hung so as to open readily from the inside outwards, in case of fire. No further precautions for fencing machinery are necessary. Arrangements should be made to secure uniformity in the administration of the Factory Act throughout India. Full-time medical inspectors of factories are not required to assist the present inspectors in securing the due observance of the Act.

Oral evidence.

Witness stated that he had had eighteen and a half years' experience of the oil industry in Rangoon. The men employed in the process of manufacture—distillation and refrigeration—worked a 10-hour day from 6 A.M. to 6 P.M., with two hours off. Extra hands were employed to allow the men to obtain these hours off. The ordinary coolies worked from 6 A.M. to 10 A.M. and from 11-30 A.M. to 5-30 P.M. He was satisfied that the men really did get these intervals of rest; when a night-shift man was absent they made up the vacancy by calling on substitutes. A day-shift man never worked on with the night shift. The candle factory worked day and night with two

Mr. A. Campbell.

shifts, but all the women and children were employed by day only. The women were employed by contract, and so were only indirectly employed by the firm. They were useful for making the little paper packets in which the candles were wrapped. All the children were certified, and the firm filed the certificates. The half-timers worked from 7 A. M. to 10 A. M. and from 1 P. M. to 5 P. M. There was a foreman for the children, who was responsible for supervising their time but the Company would accept responsibility if the children were worked overtime. While the children were away the department in which they worked was practically closed. A child of nine started at Rs. 8, but did not remain long with the Company. They soon left for ordinary coolie work, like the other people from Madras. Witness was under the impression that the present Act prohibited the employment of women at night. They were constantly recruiting children for work in the factory. The children were examined monthly. Occasionally a few days might elapse before a child was examined, and he was allowed to work in the meantime. At times they found it difficult to get all the labour required. The labour was chiefly Madras, and there were very few Burmans employed. Some of the hands were housed by the firm, and others lived in the village close by. A 12-hour day would not effect them at all, and he did not object to it. There were occasional accidents in the tin shop, but these were mostly the result of carelessness. They had their own European and native doctor. Witness had never seen any protection guards used for the tin-stampers. They provided one in twenty-five latrine accommodation, and considered that this helped to prevent delays in working. The day and night shifts changed weekly, and received the same amount of wages. All the children were nearer fourteen than nine; they made a much neater packet for the candles than the ordinary coolies. Taking the distillation plant by itself, they employed double the number of hands that would be required in Scotland where a man had to work his twelve hours without going away at all. In India the men were allowed intervals for rest. The continuous process department continued working throughout Sunday, and they were exempted under the Act from giving the compensating holiday. As a matter of fact, however the men arranged a day off among themselves. They did not draw up a working programme for the men. The holidays and rest intervals were left to them for arrangement.

Witness No. 216.

Mr. J. Reid. *Written evidence.*

Mr. J. Reid, of the Arraccan Company, Limited, Rangoon.

I represent the following factories or rice mills in Rangoon belonging to or leased by The Arracan Company, Limited.

	Men.	Women.	Children.
Dawbong mill	200	25	...
Kanounghto mill	150	...	...
Dunneedaw mill	80	6	...
Lower Poozoondaung mill	90	...	...

In addition to the above the following are employed in connection with the work of the factory, but are actually employed outside the factory:—

		Men.	Women.	Children.
Dawbqng	Approximately	600	60	70
Kanounghto	,,	500	30	23
Dunneedaw	,,	180	20	20
Poozoondaung	,,	300	25	20

The following statement gives the days in each year during the last three years during which each of the factories has worked over twelve and a half hours a day:—

	1908.	1907.	1906.	1905.
Dawbong	21	45	27	52
Kanounghto	26	58	43	50
Dunneedaw	28	50	28	42
Poozoondaung	28	48	45	50

The average number of hours *per* day the factories have worked during the last three years is given below:—

	1907.	1906.	1905.
Dawbong	8½	7½	10
Kanounghto	11½	11	11
Dunneedaw	10	10½	11
Poozoondaung	11	10½	11

The working hours of adult males should certainly be limited. All our factories are worked by shifts and none of our employees work for more than twelve out of every twenty-four hours, with intervals included in the twelve hours for food and nourishment. I am therefore not in a position to express an opinion as to whether the physique of workers is affected by long hours. When not working by shifts an interval of an hour between noon and 2 P. M. would be desirable and it is immaterial whether the prescribed hours be 5 A. M. to 6 P. M. or 6 A. M. to 7 P. M. Within the factories themselves no persons between the ages of twelve and fourteen are employed. Outside the factories, in work connected therewith, they are, but their work is intermittent and of a light nature, and not calculated to cause physical deterioration requiring the creation by law of a special class of workers intermediate between the half-timer and adult, whose working hours should be restricted. Under existing circumstances it does not seem to me necessary that a special register of all workers under the age of sixteen should be maintained in order to facilitate inquiries as to the physical fitness of the youngest adults to work full time; for the reason stated above I see no reason why the employment of women at night should be prohibited. Children are not employed in our factories.

Note.—The witness did not appear for oral examination.

MADRAS.

Views of the Government of Madras on the questions referred to the Commission.

The Government of Madras have not had special occasion to discuss the technical questions regarding ventilation, sanitation, etc., referred to the Commission, on which the evidence of witnesses is desired. The questions as regards adults and children have been considered generally, and the conclusions arrived at by the Governor in Council in G. O. No. 1261-62, Judicial, dated 26th July 1906, are recapitulated briefly below. No serious abuses appear to exist in this Presidency regarding the hours during which adults work in factories. The Government are of opinion that a day from 6 A. M. to 6 P. M., is quite long enough for an operative in an Indian factory, and should in no case be exceeded. They are accordingly in favour of limiting the hours of labour of adults to 12 hours a day, including an interval for meals. While fixing 12 hours as a maximum, it would also be desirable to empower the Government to prescribe a shorter day in the case of certain kinds of factory labour of a particularly trying character. The Government would further recommend that the age limit for adults be raised from 14 to 15. As regards child labour in factories, it may be mentioned that the number of children employed in the factories of this Presidency is comparatively small, less than 6 *per cent.* of the total number of operatives. No serious abuses appear to exist in connection with their employment. The Government however consider that it would be a wholesome measure to require children to be certified as physically fit to work, before they are allowed to be employed in factories; these certificates being procurable from any medical officer not of lower grade than (say) that of apothecary. They would also propose that the age limit of children employed in factories should be raised from 9 to 10.

The Government of Madras.

Witness No. 217.

Captain W. G. Richards, I. M. S., Medical Inspector of Factories, Madras, one of the representatives nominated by the Govrnment of Madras.

Captain W. G. Richards.

Written evidence.

Factory inspection in Madras City is carried out by an inspector of factories who draws a conveyance allowance of Rs. 50 a month, he is also inspector of boilers and prime-movers for the Presidency, and by a medical inspector who draws fees amounting to a maximum of Rs. 200 *per mensem* for factory inspection and who is also personal assistant to the Surgeon-General with the Government of Madras. In the districts inspection is performed by the Collector or his assistants as part of their ordinary duty and by the district medical and sanitary officer who gets fees for inspection: Rs. 32 if there are over 200 hands and Rs. 16 for small factories. The total amount drawn as fees by district medical officers last year was Rs 6,624, the amount budgetted for 1908 is Rs. 7,000. Inspection in Madras is supervised by the sanitary engineer to Government, in the districts by the Collectors; these officers report to the Chief Secretary to Government. The sanitary engineer does not take any action (beyond forwarding reports to Government and issuing Government Orders to inspecting officers) unless an appeal is made to him by factory owners against orders of inspecting officers. The factory inspection establishment is not recruited as such, all posts are *ex-officio* ones. My personal experience is limited to Madras but I gather from others that the Factory Act has not been carried out with very great stringency either in Madras or the *mufassal*. In Madras lately we have been more strict and two mills were prosecuted last year. The employment of a whole-time inspector would improve matters and also the whole of the inspection should be placed under the supervision of some officer who has less work to do than the Chief Secretary to Government who would be able to see that the Factory Act was administered with greater regularity than I gather is now the case. I do not think it would be advisable to appoint any one without Indian experience. Indeed I consider that actual local experience is necessary as conditions in different parts of India vary so much. Any one appointed as an inspector could be trained in the United Kingdom for a short period. It would depend on his previous experience whether this was necessary or not. The present establishment is ample in strength but is not the most suitable in other ways. As all the officers are *ex-officio* inspectors with numerous other duties it must happen in many cases that but little interest is felt in this particular work As I have already said the appointment of a special whole-time inspector is advisable; he should be paid Rs. 800 a month. I consider that the routine administration of the Factory Act should be entirely in the hands of the Local Government Centralization under the Department of Industry and Commerce would be cumbrous and would in all probability lead to trouble. Interference with trade is a delicate matter which requires handling by men who are on the spot, and who are accessible by the heads of the firms concerned. At the same time it would be most useful to have occasional visits from an expert who could not be produced in Madras with our small scope for training or employment of whole-time men. When Sir Hamilton Freer Smith came with the last Factory Committee I learnt what a factory expert might be, and was much struck by the pleasure shown by mill managers at his presence in their mills and the remark of one of them that at home such officers were held in great respect by mill people and both owners and employees got good value from their visits. It would certainly be a great help to have visits by a real expert occasionally. The proposal to employ whole-time medical inspectors is a good one where there are a number of factories close together and where an officer's time would be mainly occupied in inspection. In the Madras Presidency most of his time would be spent in travelling. In fact one officer could not get round the Presidency in one quarter or if he did it one quarter he could not continue doing it. In fact as regards effective inspection of children and enforcing sections 4 (*c*) of the Factory Act I think this would in Madras be a retrograde step unless inspection is also carried out by local officers.

It may be argued that the same remarks would apply to the special factory inspector but there are these differences he has only to inspect factories three times a year and his special functions as regards machinery do not necessitate visits at quite unexpected times. Machinery without guards cannot be pushed off the premises. Of course the inspector enforces the act all round as does the medical inspector, but if one of these officers can easily pay frequent visits at unexpected times it should suffice. If a factory expert is provided the ordinary medical inspection may be carried out

Captain W. G. Richards.

by officers engaged in other duties. Two alternatives present themselves in this Presidency: either the inspection may be carried out as now by the district medical and sanitary officer or by a reformed sanitary department The sanitary commissioner whom I consulted tells me he has asked Government to obtain for his department the services of three deputy sanitary commissioners and one commissioned officer as a personal assistant who shall be in charge of his office when he is away and I am of the opinion that the factory inspection might well be entirely handed over to these officers if appointed. The sanitary commissioner assures me they would have no time for factories and would be absorbed in work of other sorts I would be loath to advise any work being forced on an unwilling department but individual views of course vary and there would be the following advantages in following this plan:—

(1) Inspection of factories is really a sanitarian's duty and should naturally come under the sanitary commissioner rather than the surgeon-general.

(2) Inspection of any sort is where circumstances allow it better performed by a few than by many officers.

(3) An officer who has specialised in sanitary work is more likely to take an interest in matters so closely affecting the well being of the people under his care than an officer whose main interest is in hospital work.

(4) At present the number of factories is not too great in any one division for one officer to visit them every quarter. Should this prove the case later it would be easy to put a special factory officer under the sanitary commissioner or appoint an extra deputy.

(5) The addition of the factory inspection fees which it is presumed will be continued to any officer doing the work would be an additional attraction to the sanitary department which is never too attractive from a monetary point of view considering the roving life and the absence of private practice.

(6) The sanitary commissioner tours more frequently than the surgeon-general and inspects factories on occasion even now and would more easily keep his men up to the mark or tone down any tendency to excessive strictness.

The question of inspection of factories in Madras is an important one, and if the work is done by the sanitary commissioner will have to be considered by itself. This work must be done by an officer who lives in Madras at any rate most of his time. It would seem possible for the personal assistant to the sanitary commissioner to do this work if such an officer is appointed. But if for any reason this is not possible there is no reason as far as the smooth working of factory inspection is concerned why the personal assistant to the surgeon-general should not continue to do the work, he has worked under the sanitary engineer to the Government of Madras without friction and I presume therefore he would also work equally easily under the sanitary commissioner. The other scheme with which the sanitary commissioner is in accord is that ordinary medical inspection should be done by the district surgeons as now but that they should report quarterly to the surgeon general details of inspection. A form could easily be drawn up which would show if the sections of the Factory Act were being attended to. The factory inspector would of course in this case be under the surgeon general's orders and would report to the surgeon-general say once a month. This would enable the surgeon-general to ascertain if the district surgeons were keeping factories up to the mark. There is a good deal to be said for this method as it would involve few changes and could be put in practice to morrow if a special factory inspector and the clerical staff were appointed If the latter scheme is adopted it might be necessary to have a full-time medical inspector as well as a full-time factory inspector. These officers would do the Madras inspection work and supervise the rest of the Presidency under orders of the surgeon-general. The pay of the medical inspector must depend on what prospects are held out to him afterwards. To secure a good officer he should be a member of the Indian Medical Service. An outsider would find difficulties in working with service officers probably, as he would have to report on their work. If there is to be a factory service similar to the jail service and men are to be moved from one Presidency to another and have the chance of a well paid billet in the end, possibly the Madras billet might be paid on a scale fixed for the Imperial factory service presumably somewhat higher than the sanitary or jail department. But if there is no Imperial factory department and the Madras post would be an isolated one leading to nothing, pay on a considerably higher scale would be necessary. The factory inspector who would be constantly on the move would hardly be tempted to keep the post for long unless he got regimental pay *plus* 400 at least. And in order that the work might be efficiently performed it would be necessary to insist on an officer holding the post for five years at least This would render the post distinctly unpopular unless it was either really well paid or led up to something better.

Oral evidence.

Witness stated that his experience of factory inspection work was limited to two years in Madras. When he inspected a factory, he directed special attention to the children, and to sanitation; he also inspected the factory generally. He had no practical knowledge of machinery and fencing. In his opinion the certifying of the children in Madras was properly and accurately done. He believed that employment in a mill did have some ill-effects upon the health of children; the work was a strain, and the atmosphere was bad. The children began too young to be able to work long hours. He had seen cases where half-timers were doing full-time work. There were two successful prosecutions last year for this. He himself picked out, from the full-time boys, about ten lads whom he considered to be under 14 years. The mill owners admitted that these boys had been working full-time, otherwise it would have been difficult to obtain a conviction. The cases were defended, the defence being that the boys were over age, and that the owners had reasonable cause to believe they were over age. In respect of the provisions regarding children, the Factory Act had not been till lately strictly enforced in Madras, but since the prosecutions referred to owners had been more careful. It appeared to be the custom for owners to place boys on full-time employment irrespective of age. There was a sort of understanding that all the half-timers should be sent for a second examination, but he had doubts whether this was done in practice. Witness was not a whole-time officer, and it was difficult to keep a proper check unless a

man devoted his whole time to the work. Witness thought it would be better to certify that a child was above or below 9 or 14, as the case might be, and not to attempt to state a definite age, as it was difficult to do so accurately. On being further questioned, he admitted that there was no great objection to a definite age being stated, except that the certificate might be used to avoid a second examination before the child was put on full-time work. He approved of the certificate of age being final, provided that it was upheld by a second medical man. He approved of a second examination prior to full-time employment, as in the course of five years much might happen to a child. On a recent visit to the mill he had noticed that boys who had been in the mills for two years showed a distinct deterioration in health compared with those new to mill employment. In this particular case there must have been considerable abuse of the Act in respect of the working hours. The medical officer should be given the power to reject unfit children, irrespective of age. He himself rejected unfit children now, and the owners did not object. Witness agreed that he and the factory inspector did practically the same work. He thought that the special inspector could do the medical work required, but at the same time a medical man was in a much better position to enforce his orders. So far as latrines and sanitation went, the special inspector could do all that was wanted. Witness visited the factories every quarter, and the special inspector about three times a year. There had been two prosecutions, one successful and the other not; but in the case of the latter there were no identification marks on the certificate. Such marks were now entered. In his opinion the physique of mill operatives did not come up to the standard of those in outside employments. They would not require two whole-time special inspectors for the Madras Presidency, but there would be more work than one man could manage. He thought they might appoint one head inspector for Madras, and leave district inspections to be done locally. If the whole-time man had to go about the presidency he would require assistance for Madras city, but if he only had to travel occasionally, then one man could attend to Madras. It would be a great advantage, however, to have two men, even if one were a part-time man only. The whole-time man, to be of any use, would have to be a great deal in the *mofussil*.

Captain W. G. Richards.

Witness No. 218.

Mr. W. Hutton, Sanitary Engineer, Madras, one of the two representatives nominated by the Government of Madras.

Mr. W. Hulton. *Written evidence.*

The factory inspection establishment of the Presidency Town of Madras consists of two officers, the medical inspector and the special inspector, who are subordinate to the sanitary engineer to Government, who is *ex-officio* inspector of factories. In the *mufassal* the inspection of factories is carried out by the district medical and sanitary officers in all factories generally situated at the head-quarters of districts and certain specified Civil Surgeons and medical subordinates in certain factories not so situated, and by Assistant Magistrates in all factories, not being railway factories, situated within the districts in which they are employed and by all sub-divisional magistrates in all factories, not being railway factories, situated within their respective sub-divisions. In the case of railway factories, the inspection is carried out by a Government inspector of railways. The medical inspector of factories for the Presidency Town draws fees for the inspection of factories on the following scale:—

Rs. 32 for all factories employing 200 or more persons.

Rs. 16 for all factories employing less than 200 hands.

Subject to a maximum amount of Rs. 2,400 *per annum*. The special inspector of factories for the Presidency Town receives, in addition to his pay as senior inspector of boilers and prime-movers, a conveyance allowance of Rs. 50 *per mensem* for work done in connection with factory inspection. The district medical officers draw fees for the inspection of factories in their districts at the same rate as the medical inspector for the town of Madras. The total amount of fees drawn by the medical inspector and the district medical officers throughout the Presidency in 1906 was Rs. 6,289. The sanitary engineer corresponds direct with the Chief Secretary to Government. The work of the medical and the special inspector is supervised by the sanitary engineer and questions which arise in connection with the working of the Act are decided by him in consultation with the inspectors, or if necessary referred to Government for orders. In the *mufassal* and in the case of railway factories, the inspection of factories is supervised by District Magistrates and a Government inspector of railways respectively. The personal assistant to the Surgeon-General holds, in addition to his duties as personal assistant, the post of medical inspector of factories for the Presidency Town. The post of special inspector for the Presidency Town is held by the senior inspector of steam-boilers and prime-movers, in addition to his ordinary duties. There is no system of training for the factory establishment, and the present system works satisfactorily. It would be an advantage however to concentrate the inspection of factories in the Presidency Town and the *mufassal* and also in railway factories in a whole-time medical inspector and a whole-time special inspector. It is not considered necessary to lay down a hard-and-fast rule that factory inspectors should be recruited in the United Kingdom, but a short time spent there every five years or so visiting factories and observing the conditions prevailing there would be of advantage to the inspectors in carrying out their duties in this country. The present establishment, under existing arrangements, is considered adequate, but it would be an advantage to have officers solely engaged in inspection duties. It would then be possible for these officers to inspect all factories including railway factories in the Presidency. Increase of efficiency in the inspection of factories would not, it is considered, result from centralising factory administration in India and vesting the supreme control in the Department of Commerce and Industry. It would be an advantage to employ whole-time medical inspectors of factories, but their duties should not include the certifying of the ages of children in factories, which certifying should continue to be done by Civil Surgeons.

Mr. W. Hatton.

Whole-time medical inspectors should be recruited from the Indian Medical Service. They should not, it is thought, serve as medical inspectors for a longer period than five years. One whole-time medical inspector, it is considered, would be sufficient for the Presidency, but district medical officers should continue as at present to inspect factories outside the Presidency Town. The medical inspector should not be recruited and retained specially for factory inspection work, but should, as already stated, be selected from members of the Indian Medical Service and his pay should be such as would induce the best of the junior officers with public health qualifications to apply for the post and spend five years in it. A pay of Rs. 850 *per mensem* with the usual travelling and house-rent allowances under the Civil Service Regulations would, it is thought, be suitable. The medical inspector should not be permitted to take private practice. The special inspector of factories should also, it is considered, be a whole-time officer and should receive a pay of Rs. 850 *per mensem*. The whole-time medical and special inspectors should work under the orders of the Surgeon-General.

Oral evidence.

Witness stated that he was in charge of the factory inspection department in Madras town. He had not to make inspections, but he occasionally did so. He considered that the duties now carried on by the medical inspector could well be performed by the special inspector, and he would not object to an arrangement whereby the special inspectors would do all the work, except that of certifying for age. There was a duplication of work under the present system of inspection; both the factory inspector and the medical inspector did the same work. The factory inspector was also boiler inspector for the Presidency, and was away a good deal from Madras town. The boiler inspector was factory inspector only for Madras city, and the factory inspection work was the smaller part of his duties. They would require two whole-time special factory inspectors for the Madras Presidency. He disapproved of dividing the Presidency into two parts for inspection purposes. Both inspectors should have their head-quarters at Madras, and inspect the same factories. They could then consult with one another and arrange the work between them. He would not say that this view was the matured opinion of the Government of Madras. It was his opinion, and had been submitted to Government. It was not necessary that the inspector should be a medical man, and in his opinion much of the training of an Indian medical service man would be thrown away if he were retained solely for inspection work. The certifying work would, of course, still have to be done by a doctor. He was not aware of any complaints as to delay in the examination of children at present, but he considered that, if there was one whole-time medical man for certifying work for Madras city, there would still be complaints. In his opinion there was not enough work in Madras city for one whole-time medical man, if he were employed solely in certifying ages. It was the custom now to send all the children to the certifying surgeon, and this sometimes meant a long journey. It would be better if the doctor could arrange to visit the mills, or some central spot in the mill area. If the medical officer was only to do certifying work, it would be advisable to give him power to visit the mills for the purpose of examining the children while at work. When witness had visited mills he had never found under-age children working full-time. That was to say, he had come across children whom he considered very small, but he had ascertained that they all held certificates. In his opinion the certifying for age was not accurately done, and the doctors gave the children the benefit of the doubt. He considered that a good many children in the cotton mills were undersized and ill-fed, and he believed that their employment affected their health. The present factory inspector was an expert boiler inspector, he made many demands upon factory-owners for improvements, etc., and these demands were complied with. He received Rs. 550 *per mensem* as boiler inspector, and Rs. 50 *per mensem* conveyance allowance as factory inspector. The duties of a factory inspector had been added to his proper duties as a boiler inspector. There had been no corresponding addition to his salary with the exception of the conveyance allowance.

Witness No. 219.

Mr. C. B. Simpson of Messrs. Binny & Co. (Limited), Madras.

Mr. C. B. Simpson, ***Written evidence.***

I represent the Buckingham Mill Company (Limited) which employs 3,295 men, 62 women, 885 children, total 4,242, and the Carnatic Mill Company (Limited) which employs 3,315 men, 295 women, 926 children, total 4,536. The Buckingham and Carnatic mills have not worked over 12½ hours a day on any day during the last ten years. A statement showing the working hours for the two companies is appended.

	Buckingham Mill Company.			Carnatic Mill Company.		
	Working days.	Average hours *per* day.		Working days.	Average hours *per* day.	
		HOURS.	MINUTES.		HOURS.	MINUTES.
1898	311	11	43	311	11	48
1899	311	11	36	313	11	29
1900	313	11	33	313	11	30
1901	294	11	33	300	11	9
1902	312	11	31	311	11	17
1903	310	11	30	309	11	32
1904	313	11	28	312	11	35
1905	313	11	31	311	11	38
1906	305	11	27	306	11	37
1907	307	11	25	307	11	30
Average ...	308·9	11	31	303·3	11	30

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The working hours of adult males should not be limited. Physique has not been affected by long hours in Madras. Long hours are not worked in Madras factories. I should favour the fixation of an 11½ or an 11 hour working day, but not by legislation, for adults. If limited, the legal working hours for adults should, where there is no system of shifts, be between 5-30 A.M. and 6-30 P.M, and the working hours be fixed at 12 hours. The work people should have not less than half an hour for rest between 11 A.M. and 1 P.M. I think a little latitude would enable employers to adjust the hours better for women and half-timers. Between 5 A.M. and 8 P.M. seems a suitable time limit when working in shifts. I know of no instances of the illegal employment of children. I do not think that there is any physical deterioration of children or adults in Madras, and the mill hands appear to be on the whole a healthy body of labourers. So far as Madras is concerned, I do not think a special class of "young persons" is required. But I think that it would be better to introduce this class than to allow excessive hours to be worked in other parts of India. If a special class of "young persons" is created, I should limit their working hours to 11 a day, between 6 A.M. and 6 P.M. I do not think that a special register of "young persons" under the age of 16 is required, to ascertain physical fitness alone. I would advocate that the medical inspector should have authority to direct the dismissal of any person whom he considers physically unfit for factory life, quite irrespective of the worker's age. Women should not be employed at night. I would limit women's hours between 6-30 A.M., and 5-30 P.M., and allow them an hour in the middle of the day, in preference to their present legal working day. This would usually enable them, if they chose, to come to, and to leave the factory apart from the men. It would also prevent the legal necessity, which exists at present, of cutting up women's hours by periods of rest. I would then omit clause (3) of section 6 of the present Factory Act. The minimum age for half-timers to commence work at should not be raised. That would be a hardship to both parent and child. The children would be made to work by their parents to earn something, somehow, or they would beg. They are usually better in a factory, learning a trade, and to be systematic, punctual and cleanly. Usually the work given to half-timers is light and easy. It is desirable that certificates of age and fitness be obtained by children prior to employment. I do not think that children who have received a certificate of age on becoming half-timers should be required to obtain another certificate of age when they become full-timers. I think they might, with advantage, be examined for physical fitness on becoming full timers. I would suggest that a child should have its original half-time certificate endorsed, when it becomes a full-timer, by the medical officer, if he considers the child physically fit, and finds that the recorded marks on the child applying for the full-time fitness certificate correspond with the marks recorded on the original half-time certificate. It seems to me unfair both to medical officer and child that a certificate of age should be required twice. I should limit the employment of children between the hours of 6 A.M. and 6 P.M. A child should be employed once a day only, that is, before or after midday. This for many mills would limit the working day to 11½ hours. I would go further, and approve of a half-timer's day being limited to 5½ hours' work, either before or after 12 midday. Clauses (2), (3) and (4) of section 7 of the present Factory Act would not then be required. Factory owners should not be obliged to provide education at their own expense. Factories *should be in every way encouraged by the Educational Department to establish schools* for half-timers, but there should not be any compulsory legislation and factories should receive the same Government financial assistance as other educational bodies. Non-working young children should not be allowed into rooms containing machinery. I do not think there would be any difficulty in managers enforcing a law to this effect. We do not allow young children into work rooms. I think it desirable to test samples of air taken in factories to ascertain if there is any necessity for special legislation regarding ventilation. For the present I think that the medical inspector should have power to prescribe ordinary ventilators and windows being provided in such numbers as he considers adequate for air and light, in the same way as the factory inspector can prescribe guards for machinery. Legislation involving the provision of mechanical contrivances would prove difficult to work efficiently and should not be resorted to unless proved to be absolutely necessary for the health of the work-people. I do not think an attempt should be made to prescribe standards of moisture. In our wet weather it would be impossible to maintain a standard, and in our hot weather conditions change very rapidly when a dry land wind is replaced by the sea breeze. A standard of purity for water used for humidifying would seem desirable. I assume that water that is potable, or that has been produced by condensation of steam, would be covered by the standard. One latrine seat for 50 operatives would seem to be ample in any factory working between 5-30 A.M and 6-30 P.M. I think a separate urinal desirable for large latrines, but I think the ordering of this might safely be left to the discretion of medical inspecting officers. Doors opening outwards, or sliding doors with slides on the outer side, are desirable for rooms where power machinery is at work. I think the adequate provision of means of egress might be left in the hands of the factory inspector, in preference to resorting to special legislation, so that special circumstances could be considered. I do not think further fencing precautions are necessary for cotton mills. Considering the number of work people, accidents are, I think, few. The factory Act should be worked on lines that will ensure uniformity of practice in all essential features. This could be assured by moving on inspectors from one part of India to another, and by making an appeal permissible to a chief inspector. I think it desirable that one or two full-time medical inspectors of factories should be appointed to assist the present inspectors, and to ensure the uniform administration of the Act. I can afford the Commission but little information regarding the effect of hours of varying length on production. The Buckingham and Carnatic Mills have not worked by artificial light, and we have tried to work as even hours as natural light permits. In March 1900 we made an experiment with a 10 hour days. We intended to run the mills for at least a fortnight for 10 hours, but at the end of a week the piece work hands asked to have the old hours back. The figures relating to this experiment are appended. I do not consider the experiment or the figures conclusive. It takes time for the full effect of shortened hours to tell. In my opinion, improved discipline and greater speed would soon, at least partially, make up the first effects of shortened hours. I think a time limit of 14 working days might be allowed during which a child could work without a medical certificate. Many children just sample factory life, and give it up in a few days. It seems useless troubling a medical officer with such children, and the work they will do in 14 days will not hurt them. I think it desirable that a medical officer should, if

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possible, visit factories employing over 250 children once a week, and smaller factories once a fortnight. If this is not practicable, then the children should be able to visit the medical officer on 3 days a week. I think it is impossible to devise feasible safeguards which would prevent a half-timer who was refused employment in one mill as an adult from getting employment as an adult at another. Our experience is that children who have worked for a period as half-timers invariably leave one factory in the hope of being accepted at another as full-timers, and of getting a full-time certificate. I am in favour of the creation of a class of "young persons," if it is the only way of limiting factory hours without legislating for the hours for adults. If a class of "young persons" is created by law to supplement the present legislation dealing with children, I think that the working hours of cotton factories will be automatically limited to the hours during which the "women," "children" and "young persons" are allowed to work. I think over 14 and under 17 a suitable limit of age for "young persons." The probable number of "young persons" over 14 and under 16 employed at the Buckingham Mill is 700, and at the Carnatic Mill 500. I think all industries in India require exceptional treatment so long as the supply of workers remains inadequate. I think that the law should be amended only where the physical condition of the work people demands it, and where it has been found that the existing law has proved deficient, whilst being efficiently administered. I think that, if one or two experienced chief inspectors from the United Kingdom are appointed to inspect factories periodically, it would not be necessary for local inspectors to receive a portion of their training in England. I think that the local inspectors should be under a trained and experienced chief inspector. I also think that the post of factory inspector in Madras should be separated from that of boiler inspector, and that the factory inspector should not be under the Sanitary Engineer. A law dealing with all parts of India, where conditions are so varied, would appear to need elasticity, but this elasticity in working might prove very unfair unless administered by an impartial central authority. Cotton mills situated at very considerable distances compete with each other so much that there should be no possibility of preferential treatment. Unless Government or the municipalities propose to assist factory owners to house their hands, I do not think that Government should intervene in this question. In my opinion factory owners should not be *expected* by Government to interest themselves pecuniarily in employees, once the employees are outside the gates. As soon as the mill gate is passed, the owners' legal obligations, authority, and control disappear, and this should be generally recognised. Other classes of employers are not under any legislative obligation to house their people. That certain factories may find it to their advantage to provide houses, I readily recognise The Municipal authorities should control the sanitary condition of operatives' dwellings. I think that the Government of India should impress on Local Governments the necessity for uniformity in local legislation dealing with factories. I also represent the Jammalamadugu Press Company, Limited, with a cotton press at Nandyal; the Tadpatri Cotton Press Company, Limited, with cotton presses at Ariyalore, Bagalkot, Davangere and Tadpatri; and the Tirupur Press Company, Limited, with a cotton press at Tirupur. They employ—

Presses.	Men.	Women.	Children.	Total.
Nandyal	34	28	*Nil.*	62
Ariyalore	46	10	*Nil.*	56
Bagalkot	20	45	*Nil.*	65
Davangere	14	25	*Nil.*	39
Tadpatri	43	31	*Nil.*	74
Tirupur	28	31	*Nil.*	59

The duration of the season is as follows :—

Nandyal.—January and February—nothing doing; March—pressing for 7 to 10 days a month; April to July—the press is usually working every day except Sundays; August to December— the press works 2 to 3 days a month.

Ariyalore.—January to April— nothing doing; May to August—pressing for 10 or 12 days a month; September to December—1 or 2 days work a month.

Bagalkot.—The working days are—January 7 days, February 21, March 19, April 7, May 26, June 25, July 16, August 10, September 5, October 2, November *nil*, December 7.

Davangere.—The working days are—January 12 days, February 8, March 14, April 16, May 21, June 25, July 26, August 25, September 18, October 12, November 6, December 6

Tadpatri.—January to March—nothing doing. From the 1st April to the 15th August—the press works every day except Sundays. From the 16th August to the 31st December—the press works 1 or 2 days a month.

Tirupur.—In January, February and March, the press works 2 to 3 days a month; in April, it works for 5 to 6 days; in May, June and July for 15 to 20 days; and from August to December, for 3 to 4 days a month. The usual hours are—7 A. M. to 12 noon and from 1. P. M. to 6 P.M. The average working hours for men are ten hours a day, and for women nine hours a day. The men rest from 12 noon to 1 P.M. and the women from 9-30 to 9-45 A M., from 12 noon to 1 P. M. and from 3-15 to 3-30 P. M. I think all cotton presses and ginning factories should be brought under the Factory Act. The employment of women between 6 P. M. and 6 A. M. should be prohibited. I think the reasons given on page 11, paragraph 4 of Sir H. P. Freer-Smith Committee's report are good and sufficient for excluding women from night work. The Factory Act is quite

applicable to all cotton presses without modification. We have no ginning factories. We have had no accident of importance at a cotton press during the last five years. Mr. C. B. Simpson.

LIST OF ENCLOSURES.

Enclosures 1 and 2.—Statements showing the results of an experimental 10-hour day at the Buckingham and Carnatic Mills.

Enclosure 3.—A comparative return for the years 1887, 1897 and 1907, showing that though the number of days worked has been reduced, as also the number of hours, during the last twenty years, the regular attendance of workpeople has fallen off. During that period, wages have advanced about 50 per cent. on the average—some departments more, some less.

Enclosures 4 and 5.—Statements showing the constant movement of factory hands.

Enclosures 6 and 7.—Gratuity fund returns, showing how the hands leave in spite of inducements offered to stay. This fund was started in January 1904 to afford a gratuity to all employees who might stay ten years in the factory. The amount remaining at the credit of the original Buckingham 652 members on the 31st October 1907 is Rs. 28,757-15-8, and at the credit of the original Carnatic 439 members on the 31st October 1907, Rs. 19,918-7-1. The members completing ten years' service do not benefit by those who leave earlier, so that if all the original members had remained they would have had corresponding amounts to their credit.

Enclosures 8 and 9.—Returns by the medical officers in charge of the mill dispensaries, showing the prevailing causes of sickness in 1907. All hands requiring leave of absence for sickness have to go before the mill doctors.

Enclosure 10.—Return showing the attendance at the Buckingham Mill Experimental Half-Timer's School.

Enclosure 11.—A comparative statement showing the staff employed in a mill in Madras, as compared with that in a mill in Lancashire.

ENCLOSURE 1.

EXPERIMENT with a 10-hour day made by the Buckingham Mill Company (Limited) during the first seven working days of March 1900.

February 1900.				March 1900.			
Date.	Hours.	Yarn.	Cloth.	Date.	Hours.	Yarn.	Cloth.
1	10	11,610	11,530	1	10	10,887	11,208
8	11	12,100	11,934	2	10	11,203	11,480
4	11	12,481	12,277	3	10	10,617	11,245
5	11	12,762	12,430	5	10	10,753	10,627
6	10-45	12,504	11,859	6	10	11,373	11,040
7	11	13,025	12,343	7	10	11,586	11,257
8	11	12,801	12,258	8	10	12,092	11,256
9	11	12,503	12,275				
11	11	12,936	12,768	Average *per* day.	10	11,216	11,159
12	10-55	12,387	12,320				
13	11	11,201	11,719	Average *per* hour.	...	1,122	1,116
14	11	12,094	11,439				
15	11	12,409	12 041				
16	11	12,579	11,758	9	11-30	12,756	11,176
17	11	12,215	11,787	10	11-30	12,477	11,752
19	11	11,910	12,068	11	11-30	12,748	11,940
20	11	12,192	12,479	12	11-30	12,438	11,705
21	11	12,395	12,516	13	10-30	11,002	10,634
22	11	12,078	12,712	15	11-30	11,250	10,270
23	11	11,952	12,597	16	11-30	11,715	11,151
24	11	11,417	12,429	17	10-24	11,307	10 956
26	11	11,594	11,720	19	11-30	12,042	10,837
27	11	11,919	12,260	20	11-30	12,339	11,263
28	11	11,820	12,604	21	11-30	12,412	11,637
				22	11-30	13,285	11,706
				23	11-30	12,478	11,853
				24	10-30	12,079	11,501
				26	11-30	11,969	11,400
				27	11-30	12,333	11,746
				28	11-17	12,636	11,790
				29	11-30	12,790	12,003
				30	11-20	13,161	12.159
				31	10-30	12,263	12,239
Average *per* day.	10-93	12,200	12,173	Average *per* day.	11-17	12,274	11,486
Average *per* hour.	...	1,116	1,114	Average *per* hour.	...	1,089	1,019

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ENCLOSURE 2.

Experiment with a 10-hour day made by the Carnatic Mill Company (Limited) during the first 7 working days of March 1900.

FEBRUARY 1900.				MARCH 1900.			
Date.	Hours.	Yarn.	Cloth.	Date.	Hours.	Yarn.	Cloth.
1	9	13,770	8,034	1 ...	10	14,519	7,012
3	11	13,775	8,185	2 ...	10	12,505	7,779
4	10—50	14,278	9,118	3 ...	9	11,074	8,126
5	10—45	14,124	9,321	5 ...	10	12,293	7,517
6	10—30	15,007	9,722	6 ...	10	12,829	8,025
7	10—30	14,268	10,097	7 ...	10	13,082	8,186
8	8—57	11,074	8,143	8 ...	10	14,270	7,831
9	10—55	14,750	10,008				
10	11	14,718	10,017	Average *per* day	9·86	12,939	7,782
11	11	13,680	10,002	Average *per* hour	...	1,313	789
12	10	12,561	9,395	9 ...	11—8	15,252	8,544
14	10—54	12,671	8,338	10 ...	11—8	15,924	9,027
15	11	14,351	9,808	11 ...	11—0	15,069	9,076
16	11	14,730	9,376	12 ...	11—8	15,312	8,555
17	10—34	14,217	9,403	13 ...	10—8	13,326	8,377
18	11	15,412	9,210	15 ...	11—8	12,578	7,402
19	10—54	15,110	10,100	16 ...	11—8	15,300	9,022
20	10	13,776	10,142	17 ...	11—8	15,177	9,141
24	10 55	14,769	9,912	18 ...	11—8	14,549	8,580
25	11	15,640	9,386	19 ...	11—26	14,079	9,367
26	11	14,053	9,760	20 ...	10—30	14,384	9,216
27	11	13,661	9,385	23 ...	11—30	12,350	8,008
28	10—54	16,430	10,352	24 ...	11—30	14,714	8,869
				25 ...	11—30	15,054	9,603
				26 ...	11—30	14,453	9,525
				27 ...	11—28	14,169	10,100
				28 ...	11—30	14,062	10,916
				29 ...	11—27	14,552	10,033
				30 ...	11—30	14,651	10,327
				31 ...	10—30	14,060	11,483
Average *per* day ...	10·65	14,209	9,444	Average *per* day	11·2	14,451	9,258
Average *per* hour	...	1,335	887	Average *per* hour	...	1,290	826

ENCLOSURE 3. Mr. C. B. Simps

COMPARATIVE return for the years 1887, 1897 and 1907, showing the working days, and the percentage of absentees.

Buckingham Mill.

Months.	1887.		1897.		1907.	
	Working days.	Percentage of absentees.	Working days.	Percentage of absentees.	Working days.	Percentage of absentees.
January	26	9 03	26	8·16	25	12·04
February	26	8·13	24	7·12	24	12 68
March	29	7·32	27	7·51	26	11 83
April	28	8·45	26	7 32	26	12·43
May	29	7·34	26	9·82	27	13·16
June	27	7 50	26	8 28	25	13·12
July	28	6·85	27	7 39	27	11 90
August	28	7·43	26	8 23	27	11·60
September	27	6·78	26	8·84	24½	11·43
October	29	6·45	26	8 80	26½	11·00
November	...	...	26	7·07	24	10·48
December	29	6·55	27	5 25	25	10·71
Average ...	27·82	7 39	26·08	7·79	25 5	11·83

Carnatic Mill.

Months.	1887.		1897.		1907.	
	Working days.	Percentage of absentees.	Working days.	Percentage of absentees.	Wr king days.	Percentage of absentees.
January	24	6·0	24	15·55	25	15 0
February	26	5·0	24	12·32	24	15·0
March	29	6·2	27	11 56	26	16 0
April	26	5·3	26	11·12	26	16·35
May	29	6·8	26	13·32	27	16·0
June	27	7·1	26	12 28	25	15·50
July	29	6·5	27	10 43	27	13·7
August	28	5 2	26	10 08	27	12 83
September	28	6·9	26	14 61	24½	13 0
October	29	5 5	14	15·42	26½	13 40
November	26	5·8	26	13 13	24	12·78
December	29	7·2	26	8 76	25	9·55
Average ...	27½	6·1	26	12·36	5 5	14·09

ENCLOSURE 4.

THE BUCKINGHAM MILL COMPANY (LIMITED).

Statement showing the migration of workpeople compiled from the attendance Register.

Months.	1905.		1906.		1907.	
	Total hands employed.	Number of hands who left during the month.	Total hands employed.	Number of hands who left during the month.	Total hands employed.	Number of hands who left during the month.
January	3,704	232	3,801	293	3,860	278
February	3,794	253	3,820	351	3,846	299
March	3,764	342	3,831	311	3,786	324
April	3,729	268	3,856	374	3,724	323
May	3,791	295	3,780	362	3,731	319
June	3,914	257	3,835	299	3,816	274
July	3,986	239	3,888	289	3,932	309
August	4,038	302	3,891	290	4,056	259
September	4,008	271	3,894	334	4,196	273
October	3,917	304	3,845	252	4,278	263
November	3,826	310	3,827	281	4,304	252
December	3,837	255	3,836	224	4,348	258
Average ...	3,859	277	3,842	305	3,989	286

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ENCLOSURE 5.

THE CARNATIC MILL COMPANY (LIMITED).

Statement showing the migaration of workpeople from attendance registers.

Months.	1905.		1906.		1907.	
	Total hands employed.	Number of hands who left during the month.	Total hands employed.	Number of hands who left during the month.	Total hands employed.	Number of hands who left during the month.
January	3,224	191	3,467	262	4,001	321
February	3,275	205	3,414	262	3,945	329
March	3,306	224	3,416	325	4,040	395
April	3,345	276	3,448	304	4,140	382
May	3,388	226	3,522	334	4,107	397
June	3,430	306	3,632	330	4,111	336
July	3,544	281	3,748	253	4,219	278
August	3,583	351	3,869	304	4,316	300
September	3,559	262	3,781	300	4,394	309
October	3,559	227	3,757	258	4,520	361
November	3,567	226	3,734	223	4,371	264
December	3,616	257	3,857	190	4,387	280
Average ...	3,450	253	3,637	279	4,218	329

ENCLOSURE 6.

THE BUCKINGHAM MILL COMPANY (LIMITED).

Statement showing the migration of workpeople as shown by the gratuity fund register.

Months.	1904.		1905.		1906.		1907.	
	Pass-book holders.	Original pass-book holders.	Pass-book holders.	Original pass-book holders of 1904.	Pass book holders.	Original pass-book holders of 1907.	Pass-book holders.	Original pass-book holders of 1904.
January ...	...	...	2,897	1,689	2,964	1,121	2,932	814
February ...	...	...	2,875	1,622	2,979	1,076	2,929	785
March ...	...	..	2,860	1,552	3,012	1,040	2,930	767
April ...	...	...	2,826	1,483	2,904	998	2,823	747
May ...	...	...	2,869	1,420	2,932	967	2,802	729
June ...	...	...	2,955	1,380	2,992	943	2,887	712
July ...	2,159	2,159	3,056	1,336	3,019	922	2,784	688
August ...	2,278	2,117	3,129	1,300	3,015	908	2,847	672
September ...	2,412	2,071	3,128	1,262	3,059	885	2,946	668
October ...	2,463	1,976	3,064	1,228	3,070	867	2,995	652
November ...	2,550	1,866	2,981	1,186	2,951	846	3,021	650
December ...	2,778	1,767	2,896	1,156	2,945	829	3,002	641

ENCLOSURE 7.

Mr. C. B. Simps

THE CARNATIC MILL COMPANY (LIMITED).

Statement showing the migration of workpeople as shown by the gratuity fund register.

Months.	1904.		1905.		1906.		1907.	
	Pass-book holders.	Original pass-book holders	Pass-book holders.	Original pass-book holders of 1904.	Pass-book holders.	Original pass-book holders of 1904.	Pass-book holders.	Original pass-book holders of 1904.
January	1,448	1,448	1,466	938	1,934	704	2,205	542
February	1,481	1,392	1,459	919	1,981	694	2,299	535
March	1,476	1,336	1,496	902	1,908	683	2,242	525
April	1,458	1,269	1,376	883	1,922	667	2,299	514
May	1,425	1,184	1,420	857	1,950	653	2,244	499
June	1,483	1,132	1,396	838	1,914	627	2,287	489
July	1,520	1,099	1,783	825	2,127	609	2,200	477
August	1,578	1,065	1,913	811	2,129	588	2,145	463
September	1,602	1,039	1,792	789	2,064	581	2,139	452
October	1,667	1,001	1,753	770	2,031	574	2,112	439
November	1,598	979	1,731	750	2,213	562	2,093	438
December	1,609	959	1,817	732	2,219	551	2,043	428

ENCLOSURE 8.

THE BUCKINGHAM MILL COMPANY (LIMITED).

DISPENSARY REPORT.

From 1st January to 31st December 1907.

Diseases.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Fever ...	363	349	316	435	338	347	444	380	381	575	434	478
Small-pox ...	5	42	1	9	3	...	1	...	...	...	2	1
Chicken-pox ...	26	...	30	12	3	1	1	1	3	4	3	1
Measles ...	...	...	..	...	...	...	1	...	...	1	4	13
Dysentery ...	7	8	8	9	5	10	13	9	12	9	16	14
Diarrhœa ...	8	8	18	14	17	6	22	45	23	13	15	18
Rheumatism ...	14	9	8	6	12	11	15	11	6	14	12	5
Lung diseases ...	10	20	3	4	6	3	2	8	6	10	12	17
Skin diseases ...	38	70	59	37	34	23	17	14	14	16	26	34
Wounds ...	13	28	28	19	51	39	28	35	40	34	17	26
Ulcers ...	19	19	42	36	71	57	65	76	42	40	17	34
Other diseases ...	52	67	66	91	146	109	134	128	101	104	75	86
Total ...	555	620	579	672	686	606	743	707	628	820	633	727

Mr. C. B. Simpson.

ENCLOSURE 9.

THE CARNATIC MILL COMPANY (LIMITED).

DISPENSARY REPORT.

From 1st January to 31st December 1907.

Diseases.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Fever ...	257	300	251	275	225	244	248	300	242	298	318	255
Small-pox ...	2	1	3	...	...	1	...	...	...	...	...	...
Chicken-pox ...	13	33	23	5	6	...	1	1	...	...	2	1
Measles ..	...	...	1	1	1	...	...	1	...	3	4	...
Dysentery ...	7	4	5	2	6	7	12	10	12	7	12	8
Diarrhœa ..	10	9	10	9	17	15	18	28	25	13	15	22
Rheumatism ...	8	8	6	3	6	5	11	9	7	6	8	10
Lung diseases ..	7	11	3	3	4	6	1	3	4	7	8	14
Skin diseases ...	44	53	48	50	52	58	45	30	24	26	20	40
Wounds ...	14	21	18	22	15	25	32	36	30	28	20	18
Ulcers ...	10	18	23	20	23	18	35	34	25	28	16	25
Other diseases ..	54	60	58	64	60	70	83	88	78	90	70	87
Total ...	426	518	449	454	415	449	486	540	447	511	493	480

ENCLOSURE 10.

THE BUCKINGHAM MILL COMPANY (LIMITED).

Half Timers' School.

Infant classes to 4th Standard started December 1903. At commencement no fee charged, but owing to smallness of attendance a fee of 6 pies per month for infant classes, and 1 anna per month for standard classes, was instituted, which had the effect of improving attendance. The school gets a Government grant, and is inspected by the authorities of the Educational department. Attendance is voluntary. The school is intended to teach English, reading, writing, arthemetic, and a little drawing to half timers employed in the factory. The children of workpeople too young to work in the factory may also attend the school.

Months.	1904.		1905.		1906.		1907.			
	Half timers in mill	On school roll.	Half timers in mill	On school roll.	Half timers in mill.	On school roll.	Half timers in mill.	On school roll.	Average number present.	Percentage absent.
January	278	111	489	140	442	224	711	409	238	42
February	301	168	513	149	449	374	694	347	222	36
March	292	156	500	177	448	379	663	287	177	38
April	274	138	478	185	452	390	639	242	143	41
May	289	158	474	177	476	420	648	252	119	53
June	296	157	493	239	505	392	674	228	118	48
July	324	173	487	221	531	446	764	261	140	46
August	352	140	470	187	536	351	827	301	142	53
September	376	123	450	182	527	352	865	280	236	16
October	391	177	418	168	519	385	909	832	261	21
November	404	151	406	158	585	377	917	361	293	19
December	450	147	415	265	670	417	917	353	252	28

ENCLOSURE 11.

Mr. C. B. Simpson.

COMPARATIVE statement of staff employed in a mill in Madras as compared with a mill in Lancashire.

35,000 ring spindles, 800 looms, average count 16*s*, Madras 67½ hours, Lancashire 54½ hours *per* week.

	Madras.	Lancashire.
Engine Department.		
Engine drivers	1	1
Firemen	12	4 With night watchmen.
Ash shifters and cinder screeners	7	1
Coal shifters	4	...
Boiler cleaners	12	2
Engine oilers and cleaners	4	2
Oilers in mill	12	2
Writer, fitter and reserve men	12	...
Proportion 5·33 to 1	64	12
Carding.		
Carder	1	1
Under carder	...	1
Head maistries and writers	10	...
Assistant maistries	8	...
Fitter and carpenter	2	...
Strap piecers	2	...
Bobbin carriers	7	2
Roller coverers	3	1
Mixing	44	10
Blow room	36	8
Cards	40	14
Drawing	57	15
Slubbing	13	13
Intermediate	20	10
Roving	134	38
,, half-timers 84=	42	...
Proportion 3·70 to 1	419	113
Spinning.		
Spinning master	1	1
Assistant spinning master	1	1
Spinners	384	70
Gaiters	36	24
Jobbers and oilmen	41	7
Bobbin carriers	20	4
Doffers and sweepers, half-timers 300 =	150	40
Writers, carpenter and fitter	4	...
Banding	7	2
Proportion 4·32 to 1	644	149
Doubling.		
Doublers	15	4
Doffers, half-timers 28 =	14	4
Jobbers	1	1
Proportion 3·33 to 1	30	9
Winding.		
Winders	54	48
Labourers	10	1
Spare hands, half-timers, 36	18	...
Jobbers and writers	4	1
Proportion 1·72 to 1	86	50

Mr. C. B. Simpson.

	Madras.	Lancashire.	
Colour Winding.			
Winders	130	84	
„ half-timers, 150	75	2	
Labourers	4	1	
Jobbers and assistants	10	1	
Proportion 2·48 to 1	219	88	
Colour Pirning.			
Pirn winders	100	96	
„ half-timers, 100	50	2	
Labourers	1	...	
Jobbers and assistants	9	...	
Proportion 1·63 to 1	160	98	
Warping.			
Warpers	19	12	
Labourers	...	1	
Proportion 1·46 to 1	19	13	
Sizing.			
Sizers	20	10	
Labourers	11	3	
Jobbers	1	...	
Writers, fitters and carpenter	6	2	
Proportion 2·53 to 1	38	15	
Reeling.			
Reelers	100	50	
Labourers	7	1	
Spare hands, half-timers, 50	25	..	
Jobbers and writers	5	...	
Proportion 2·69 to 1	137	51	
Twisting and Drawing.			
Full-timers	33	33	
Labourers	1	1	
Jobbers	1	...	
Proportion 1·03 to 1	35	34	
Weaving.			
Head maistry	4	1	Inside Manager.
Warp maistry	1	...	
Loom maistries (jobbers)	34	10	
Weavers	800	320	
Learners and spare hands	100	15	
Strap piecers	4	...	
Carpenters and fitters	8	3	
Weft and beam carriers	12	1	
Sweepers	8	...	
Proportion 2·77 to 1	971	350	
SUMMARY.			
Engine department	64	12	
Carding	419	113	
Spinning	644	149	
Doubling	30	9	
Winding	86	50	
Colour winding	219	88	
Colour pirning	160	98	
Warping	19	13	
Sizing	38	15	
Reeling	137	51	
Twisting and drawing	35	34	
Weaving	971	350	
Proportion 2·67 to 1	2,622	932	

Witness stated that he had had 21 years' experience of the cotton and woollen industries in India and had also had some home experience. In his opinion any working period over twelve hours a day was too long for Indian labourers. He objected on principle, however, to any interference with adult male labour; if some restriction was considered necessary, then he approved the formation of a "young persons," class, with working hours up to eleven a day. This would determine the working hours of the mill. He personally favoured an eleven-hour day. He did not think that in their mills they would suffer in production if such a day were fixed. Their longest day now was 11½ hours, and the shortest 11 hours; they obtained as much production in the shorter cold weather days as in the longer hot weather days. A fixed 11½-hour day would not handicap the cotton industry in Madras in any way in competition with other countries. As a matter of fact they had never worked the long hours in force in Bombay and the United Provinces. They had also given the Sunday holiday without any loss in production *per annum*. They spin up to 40's but their average counts would be 16's. With an eleven-hour day they might be able to speed up the preparation a little, but they were going as fast now in the spinning as they could go. The weaving also might be pulled up a little. They had forty-inch looms, and worked at 200 picks, but this could perhaps be increased to 230 by increased application in a shorter day. They had one man to each loom, because if they gave two looms to one man it would mean a loss of three-eighths of the loom's capacity. They would prefer to stop the loom altogether rather than hand it over to a man working another loom. They never allowed one man to work two forty-inch looms. They had, however, a few 26-inch looms, two of which were worked by one man. They had dry winds in May and June and this might have something to do with the production being as good in the shorter cold weather day as in the longer hot weather day. He considered they obtained as much production from their looms as any mill in India. He estimated the average production a day at 16 or17 lbs. a loom. If the hours for children were restricted to the period between 6 A M and 6 P.M., it would mean that the mill could not run outside these hours. If mills, however, wished to give a long midday interval, then those particular mills might be allowed to start earlier or finish later. Personally, he did not favour children working for more than 5½ hours a day. They did not give a long midday interval in Madras, because if they did there was the danger of the men not returning to work. There was a large amount of drunkenness among the Madras cotton operatives, including the young adults. Witness would welcome legislation to prevent the sale of intoxicating liquors on Sundays. There was no general demand for a longer midday interval, or for a second interval. It was the custom of the district for the operatives to take one meal in the middle of the day. Children of 14 and upwards were addicted to drinking. They drank after leaving work at night, and also on Sundays, and after pay days. There was also a great deal of indebtedness amongst the workers. Witness did not think that it was the custom in Madras to pay the jobber in order to obtain employment. Occasionally a man complained that he had had to pay Rs. 5 to get a particular loom. This was not general, however. He was of opinion that the mill operative, generally were of as good physique as persons in outside employments. They had a mill in Bangalore which occasionally worked 14 hours, but the operatives there were not so good as the Madras men The length of the working day at Bangalore was left to the discretion of the manager. The mill was partly woollen and partly cotton, and they had tried both a twelve and fourteen-hours day. They could not obtain in twelve hours the production they did in fourteen hours; but despite this it was his opinion that it was not economical to run a mill over eleven hours a day. He could not compare, hour by hour, the working of the Bangalore and Madras mills, owing to the great difference in the conditions of work. He had, however, had the following statement prepared by the Bangalore Woollen, Cotton and Silk Mills Company :—

Mr. C. B. Simpson. *Oral evidence.*

Average in ozs. *per* spindle during the 14-hour days.		Average in ozs *per* spindle during the 12-hour days.	
10's.	20's.	10's.	20's.
15 08	8·80	11·44	8·30
15·12	8 58	12 08	7·94
14 48	6 91	11·18	8 39
14·40	8·37	14 84	8 59
15·28	8·66	15·72	8·44
14·64	8 66	13·36	8·45
13·72	7 89	14·96	8·18
16 04	9·18	14·68	8·26
14·48	9 04	13·16	7 92
14·56	9 21	14·28	8·36
16·36	9·01	15·20	7·83
16·16	9·52	15·28	8·00
16·64	9·23	...	8·58
14·72	9·78	...	7·59
16 88	9·51	...	...
Average ... 15·53	8·82	Average ... 13·84	8 20
Average in ozs. *per* hour 1·08	·63	Average in ozs. *per* hour. 1·15	·68

Witness was not in a position to trace the life history of any particular worker. A child, when entering the adult stage, generally went to another mill. If he returned to their mill after passing the doctor he would start as a spinner, and then, when big enough, he would go into the carding or weaving departments. The operatives continued steadily at their work, but did not stop continuously with any particular mill. A large proportion of their adult spinners

Mr. C. B. Simpson. had been at one time or another, half-timers in their mills. In order to encourage labour to stay for ten years they had started a gratuity fund. They had not employed women in their mills since the amended Act made it imperative to give them one and a half hour's interval during the day. The women were dispensed with gradually. It would certainly be more convenient to employers if men and women were allowed to work the same hours, but personally he did not care for the class of women obtainable in Madras, and should not re-employ them. He would let omen work for eleven hours, and do away with the long one and a half hours' interval. If possible they should be allowed to come to work a little later in the morning and to leave somewhat earlier at night. A quarter of an hour's grace for the women at each end would not interfere with the mill, but half an hour might. He approved of women being grouped with the "young persons," class. He thought that the Inspector should have power to turn away from work all physically unfit children. The half-timers' certificate should specify the age of the child, and this would do away with the second examination at 14 years. It would not be any particular inconvenience to the mill if all children were required to obtain certificates before working; and there would be no inconvenience if provision were made for weekly examinations. The children could easily remain for one week pending examination, and without working. The Medical officer who at present examined their children did so on one day in the week, but some officers did not mind the children coming every day. He had known of instances where children had been sent back by the Doctor on the ground that he had not the time to examine them. This greatly inconvenienced the working of the mill, and ought to be prevented in future. From the mill point of view the examination of children at present was not done in a suitable and convenient manner. He approved of the appointment of a whole-time Medical officer for age certification work; if this was done properly then a weekly examination would meet the case. The statistics in his written evidence showed an increase in absenteeism in 1907; this was partly attributable to higher wages, drink, and to exceptional opportunities for employment elsewhere. The labour market was at present normal. In times of distress up-country the market was flooded with labour. He did not think that the jobbers in Madras deliberately changed the hands in order to obtain extra money by levying *dasturi* from the new hands. The jobbers and men were paid by production, and it would not pay the jobber to be constantly changing his hands. In order to make up for absences they employed ten per cent. extra hands. He approved of the Medical officer's opinion in regard to age being declared final Rather than have a fixed standard of purity of air he preferred giving power to the Inspectors to require owners to make necessary arrangements for ventilation. In this matter they must credit the Inspector with being reasonable. He failed to see how they could insist on a fixed standard of purity of air in India, where no one would take the trouble to look after mechanical appliances. Such a rule could not be enforced, and the standard would become a dead letter. He much preferred that adequate ventilation should be secured by natural means.

Considerable trouble had been taken over the figures in enclosure 12, and he believed that the results arrived at gave a fair indication of the comparative staffs that would be employed in Madras and Lancashire. The figures were worked out by a small committee of his English assistants, who were well acquinted with the conditions of work in Lancashire. The figures for roving showed 134 Indian operatives to 38 in Lancashire. but in considering this it was necessary to allow for the difference in quality of the cotton, climatic conditions, etc. He did not mean to say that if 982 Lancashire operatives came to India they could run a mill now worked by 2,622 Indian operatives. From the latter figure must be deducted, to start with, the 10 per cent. extra hands. The attendance at the Buckingham school had increased since fees for attendance were imposed. In the Carnatic mill the *personnel*, judged by numbers only, changed once a year, but the same hands were always coming and going. The length of the hours worked had nothing to do with the matter. Witness considered that the Madras workman is steadily increasing in dexterity, and efficiency as an artisan, but that in attendance and application there is no improvement. This lack of improvement in application is attributed to drink, and witness also attributed to that cause the fact that, while wages have risen considerably, the Madras worker is no better housed and no better off than he was 10 or 15 years ago.

Witness No. 220.

Mr. Tulsidas Narsi. *Written evidence.*

Mr. Tulsidas Narsi, Agent of the Madras United Spinning and Weaving Mills Company, Limited.

I am of opinion that there is no necessity to limit by law the hours of adult labour. No factory owner has power to retain hands by force. The operative joins of his own free will and consent, and in doing so he evidently prefers it to other mode of living, and even after joining if the work be a hardship to him there is nothing to prevent him from leaving the work. There has not been any request from either the employers or the employés to the Government for regulating the working hours, and any legislative interference in their behalf will be invariably taken by both the employers and the employed as interference with their liberty. I do not think the physique of workers is being affected by long hours, because they do not steadily stick up to their work, and after all the factory work is not so very tiresome as compared with other spheres of life. If any legislation is contemplated with a purely humane view I think our cultivating classes deserve the first consideration. This work is very laborious. They form a majority and the backbone of our country, and their conditions admitted on all sides to be deserving of consideration. Factory labour is undertaken by a very small minority of our population; it is well paid and quite contented with its lot, and does not crave for any legislative help. So far as Madras is concerned I take the liberty of pointing out that there is a class of men carrying on carting agency work who employ men instead of animals to drag the carts. These men are made to drag a cart load of nearly two tons, with bare body and barefooted, under the trying sun, and the work exacted from them really deserves sympathy. The number of men thus engaged in Madras is, I think, not less than the number of men working in Madras factories, and I daresay that the

work allotted to my men in the factory is a thousand times better than this animal work. If it is deemed necessary to regulate adult labour, there should be no restriction to work 13 hours a day, as it suits best the factory owner. It is not advisable to create a class of workers corresponding to "young persons", and I do not think there is any deterioration in the health of children working in factories. It is my opinion that they become better operatives from being used to factory life from young age. The factory owner is interested in engaging hands physically fit, and therefore any register to keep a check on this matter is unnecessary. Prohibition against women working at night will inconvenience ginning and pressing factories, so it will not be advisable to restrict employment of women at night In my opinion the minimum age of children, fixed at nine, is quite reasonable, but if there is good reason to believe that this affects the health of the children it may be raised to ten. I am not in favour of enforcing certificate of physical fitness for children. It will be to the interest of the employer to see that the operatives he employs are fit to do the work for which he is paying I do not think it necessary to have certificates to allow half-times to work full time. The original certificates granted to children may be taken as sufficient proof of age As children are generally employed in sets, any legislation in this matter is unnecessary. It is not advisable to force mill-owners to provide elementary education to children. It had been found impracticable to stop non-working young children from accompanying their parents into the factories. Any attempt to improve ventilation, and purity of air, in a factory, for the good health of the workmen is desirable, and especially so in blow-room, and carding rooms. How this should be done is beyond my experience to say. The present standard of latrine accommodation is found quite sufficient. It is desirable that all doors of factories shall be so arranged as to readily open from the inside outwards in case of fire. I do not find the necessity of any further precautions for fencing machinery in cotton factories. I do not think medical inspectors for factories are required, as the work done by them is identical with that of the special inspector of factories. **Mr. Tulsidas Nand.**

Oral evidence.

Witness stated that they employed 700 men, 130 women and 250 half timers. Their longest working day was 12 hours 56 minutes, exclusive of the half hour's interval, and the shortest day was 11 hours 40 minutes. They worked daylight hours, and their average day was 12 hours 18 minutes. In the event of a twelve-hour day being enforced, they would have to introduce electric light. Witness had been three years in the industry in Madras, ten years at Bellary and one year each in Bombay and Aurangabad The Bellary and Bombay mills worked daylight hours. In his opinion a fixed twelve-hour day would adversely affect the cotton industry, as they could not be stricter with the men. They did not send yarn to China, but they were indirectly interested in the state of that market. If the China market was dull then Bombay merchants sent their yarn to Madras. The shorter day would also increase the cost of production. It was not over-production in Bombay which caused the recent dullness in the China market. Ten years ago Bombay had a monopoly of the China market, but now Japan supplied forty *per cent.* of China's demands. Japan had succeeded in underselling Indian goods because their mills worked 24 hours a day. Japanese yarn was not dearer than Indian yarn. Japan had a further advantage in obtaining American cotton. Japan competed with India in 16's and 20's. Witness had never tried a 24-hour day with two shifts, and he could not say whether a sufficient labour supply was available to do so. At certain times of the year there was a scarcity of adult male labour. He was not aware of any general practice of employing half-timers on full-time, and if the Commission found half-timers in his mill working full-time, then it was due to a mistake. Smart half-timers were not promoted to full-time irrespective of age, and he should disapprove of this being done. The manager generally attended to these details. The mill operatives were as strong as persons in outside employments and the children were not underfed. If the children appeared to be underfed, it was because of the dearness of food-grain and was a condition common to all children in Madras. They always closed the mill between 3 and 6 P.M. on the 15th day of the month, and also at the end of the month, for cleaning, so that Sunday could be a full holiday. If in the course of the week they gave a native holiday then they worked on Sunday. In exchange for native holidays they worked on about fifteen Sundays. Their hands had never made any request for the Sunday holiday, such as, he understood, the other Madras mill-workers received. The operatives were paid on the 15th of the succeeding month. Witness considered that the average production *per* spindle *per* hour in the long and short days was about the same. In July 1906, whith an average working day of 12 hours 27 minutes, they obtained 5 53 ounces production, or ·44 *per* hour. In December 1906, with an average working day of 11 hours and 2 minutes, they obtained 5 14 ounces, production, or ·46 *per* hour. The months of February and March were the best in Madras for working from the humidity point of view There had been strikes in their mill. On one occasion the medical inspector wished them to prevent non-working children from entering the mill. When they sought to do so the hands struck and witness had to give in. He told the inspector that they were unable to carry out his orders In some cases they accepted horoscopes as evidence of the age of Hindu children, but as far as possible they obtained the doctor's certificate of age. The children were frequently sent back unexamined. There were only two certifying surgeons, and they said they had no time to examine all the children. Sometimes the whole basch of children would be returned unexamined, and this greatly inconvenienced the mill. The children were, however, taken on in the mill, although unexamined. He considered that there should be greater facilities in Madras for the certifying of children, and power should be granted to certain private practitioners to grant certificates of age. They had 40 to 50 children examined every month. They had a doctor attached to their mill, he was an assistant surgeon.

Witness No. 221.

Major O. Donovan, I.M.S., Presidency Surgeon, 3rd District, and formerly Medical Inspector of Factories, Madras.

Major C. Donovan.

Written evidence.

As far as my experience goes the working hours of adult males should be limited, the time varying with the nature of the factory. For example, take a cotton mill working from 6 A.M. to

Major C. Donovan. 6 P M. with an hour interval between 12 noon and 1 P.M. for meals. The physique of the adult workers in Madras is not effected to any marked extent by the long hours in vogue, nor have I noticed any physical deterioration in young persons between 12 and 14 years of age illegally employed as adults; no creation of a special law for such is considered necessary. I have no experience of the employment of women at night. The minimum age of children allowed to work in factories need not be raised beyond nine years. Certificates of both age and physical fitness should be required before children are allowed to work in factories, on reaching adult age a certificate of physical fitness need only be called for. The need for the provision of elementary education of factory children by the factory owners is a moot point, I have no experience on this head to enter into details. Non working young children should not accompany workers to dangerous or unhealthy parts of factories. I see no difficulty in prohibiting such a practice. Such children need not be debarred from entering the healthier parts of the factory compound. Proper ventilation should be secured for the factories but I see no adequate reason for entering into minute details of testing samples of air to prescribe an analytical standard of the purity of the air nor of the water for humidifying purposes. The standard of moisture for the health of the workers should be investigated commensurate with the welfare of the operatives and the requirements for manufacturing processes The latrine accommodation of one seat for every 25 workers is adequate, the provision of separate urinals is necessary in the larger factories. In case of fire all doors of working rooms should be hung so as to open easily from the inside outwards. The fencing of machinery in spinning mills and printing presses or where there is complicated machinery needs consideration as far as Madras is concerned. In my opinion further precautions are requisite. I was medical inspector of factories for the town of Madras from August 1898 to January 1903, in addition to the duties of Secretary and personal assistant to the Surgeon-General with the Government of Madras. Since 1903 I have been a physician in the General Hospital, Madras, where factory hands along with the general population are admitted and so obtained an opportunity of detecting any ill-health or diseases arising from work in factories. I am acquainted with nearly all classes of factory operatives, for instance, iron foundries, cotton mills, printing presses etc. Their health compares favourably with the general average of the non-factory population of the same class. I have not formed any definite opinion on this subject nor can I supply any statistics regarding the matter. The operatives do not suffer, as a rule, more than the general population of the same class from any specific forms of diseases, the only exception noted is the prevalence of pulmonary tuberculosis among compositors in some of the printing presses. Strange to say, workers in cotton mills, where the air is moist and warm and full of floating cotton fluff, do not apparently suffer from pulmonary mischief. For the determination of the age of factory workers I consider the test usually adopted in Europe may be carried out generally in India. It is true the young population out here is more precocious as far as sexual maturity is concerned, so the rules as regards the appearance of hair in the axilla and pubis might be changed to a year sooner than is usual in temperate climates. From my small experience I consider the dentition test may be relied on in India. The permanent teeth would appear a year or so earlier.

Central incisors	7 years	Posterior bicuspids	9 years
Lateral „	8 „	Anterior molars	6 „
Canines	10 „	Second „	11-12 „
Anterior bicuspids	9 „	Posterior „	16 and upwards

The existing law as to employment of children in factories is evaded in some cases, both by employing as half-timers children under nine and passing off as adults children under fourteen. Such instances have come under my observation in factories with very slack discipline and usually run under the supervision of Indians, I am not in favour of a whole-time medical inspector for the factories in the Presidency of Madras. The arrangement I should suggest is that the Deputy Sanitary Commissioner under the orders of the Sanitary Commissioner should be appointed the medical inspector of factories for the Presidency, and in addition to his pay, he should receive the emoluments as at present in force, *i e*, Rs. 16 for factories under 200 and Rs. 32 for those over 200 operatives. The latrine accommodation of one seat for every 25 persons is quite suitable.

Oral evidence. Witness stated that he had had opportunities of comparing mill operatives with persons in outside employments, and could detect no difference in physique. Mill operatives had no special tendency to phthisis Several tuberculosis cases had come to hospital from the Government printing press; they were probably the result of bad hygienic conditions. There was no special disease amongst cotton mill operatives He had no statistics on the subject, but mill operatives made frequent use of the General hospital and he had formed the opinions stated above from his observations. Witness did not think that the health of the children was affected by the length of hours worked He was medical inspector for four years and had opportunities of judging. Generally speaking, the children in the mills would be found to be similar in physique to those in the schools. If the cotton operatives were in bad health, it could not in any case be attributed to excessive drinking, and he knew of no disease prevalent among mill hands, and arising from this cause. A good many half timers were employed in the Mount Road printing presses. When a boy came up for an age certificate, witness put down what he considered to be his age. If the age was stated definitely on the first examination, then the second examination for age would be unnecessary. Personally, he considered it easier to make a guess at the age at 14 years than at nine years At 14 years one could rely on the signs of puberty He was not a great believer in the dentition test. If witness had had the power, he should have rejected many children as physically unfit for work. Many of the children seemed of poor physique, and half starved, and the power of rejecting such children should certainly be given to the surgeon. Witness approved of a second physical examination at 14 years of age It was his opinion that the law in respect of the employment of children was evaded in the cotton mills in Madras: at times there had been a great deal of evasion This was chiefly due to the children not being sent for a second examination prior to their employment as full-timers. If a case was detected of a half-timer working full time, the manager excused

himself on the plea that he was going to send the child in a day or two for examination. He considered that the work of certifying for age in Madras was fairly well done, and that children were not given the benefit of the doubt He had never h ard of a child being sent back unexamined by the doctor on the ground that he had no time. Witness examined from five to six children a week. He approved of a fixed twelve hours' day. While he had not seen any deterioration in health, yet he considered, on general grounds, that a man should not work longer than twelve hours a day. He thought that the mills in Madras, had plenty of ventilation, but in the hot months it was probable that the ventilators were closed in order to get the right temperature or moisture. Steps should be taken to ensure proper ventilation during the months of May and June. He saw no objection to an order laying down that in all factories the air should not contain more than a certain percentage of carbonic acid gas. Major C. Donovan.

Witness No. 222.

Mr. A. Rockley, Coimbatore.

I am manager of the Coimbatore Spinning and Weaving Company (Limited) Mills, Coimbatore, where the daily average numbers employed during the year 1907 were 376 men, 237 women, 325 male adults or "young persons", and 214 children. This mill, from the time it started work in 1889, or over nineteen years ago, has worked regularly 12 hours a day. The hours of work are from 6 A.M. to 7 P.M., with an interval of an hour at midday for rest and meals. Every Sunday is observed as a "day of rest", irrespective of whether there are holidays during the week or not. It is in my opinion desirable, both from a humane as well as from an economic point of view, that the hours of work for adult males should be limited by legislation Long hours in a factory must, inevitably, affect the physique of ordinary human beings, but to adduce proof that long hours *have* affected the physique of operatives employed in an industry which has been in existence in India for over a quarter of a century, is difficult, since there is available no material for reference or comparison. The physique and stamina of mill operatives, for instance, are far below the average of the agricultural class proper, but whether this would form a fair basis for comparison is questionable, notwithstanding that there are all classes and castes working in mills, But looking at the positive rather than at the negative side of this question, I think it will be conceded by even the most prejudiced, that moderate hours of labour (12 in 24) interspersed with regular intervals of rest, must be conducive to *improvement* in the health, condition, and physique of operatives, and in this way result in benefit to employers. If the midday interval is intended for meals only, then half an hour is just sufficient for the purpose, but if this interval is intended for "rest" as well, then it should be fixed at not less than one hour during the day I would suggested one day's rest in seven, and make it compulsory for all factories to close on Sunday. "Holidays" in India, as the world over, are not "days of rest". Government offices and works, as well as works and offices of all large companies in India, observe Sunday as a day of rest, and as the duties of these employees, are scarcely more arduous than those of the mill operative, I think the boon, or rather the necessity, should be secured to the latter by legislation, since there is no hope of it ever being accorded otherwise. I therefore advocate a 12 hours' working day, with an hour's interval during the day for meals and rest, and that every Sunday be observed as a day of rest. Further, that no work should begin before 5-30 in the morning nor be continued after 8 o'clock at night. prescribing the hours of work in various districts to suit conditions obtaining there. My opinion is that the creation of a class of "young persons" between adults and half timers would only add to confusion without in any way preventing illegal employment, where such, at present, exists. For, if legislation is unable to prevent illegal employement under present conditions, the mere creation of another class would scarcely, I think, make it more effective, while, on the other hand, it may lend additional cover for infringement of rules. It would, I think, prove effective if, in addition to the rules now in force, a separate and special register was kept in which certificates of "physical fitness" were entered for all half-timers drafted to full time work. To guard against illegal employment of children demands only this fresh legislation, closer supervision, and tactful application of the provisions of the existing Act and of the rules framed thereunder. The employment of women at night should be prohibited. I think it would be inadvisable to raise the age of children above 9 years It has been my experience, in different parts of India, that the condition of children is improved by admitting them to regular work in factories, instead of allowing them of wander about the streets, feed on garbage, and contract bad habits The hours of labour as at present prescribed and the light nature of the work they perform are in no way detrimental to their physique at this tender age. Certificates of both age and physicial fitness may be insisted upon before children are allowed to work in factories, due regard at all times being had to the nature of work the children are called upon to perform. In the case of half-timers maturing as full-timers on certificates once granted, the age qualification might be dispensed with, but one of physical fitness insisted upon, since the hours of full-time work are longer, and the nature of work, at times, more arduous. Mr. A. Rockley. *Written evidence.*

The confining of children to regular sets would certainly prevent, to a great extent, illegal employment of half-timers on full-time work. It may be permitted to owners and managers to change whole sets from morning to evening work and *vice versâ*. In fact, periodical changes of sets would be beneficial in more ways than one. I do not think it should be made compulsory on owners to provide elementary education at their expense. Where optional elementary education is undertaken, the school should be in a compound separated from the mill, or the object for which it is intended may be abused. Free elementary education, if undertaken and rendered compulsory by Government, would do away with the possibility of many abuses of the Act, and tend to the elevation of the working classes. It would be a hardship to prevent non-working children from bringing food to workers in factories, but it should not be difficult to legislate for the absolute exclusion of all uncertificated children from the mill buildings proper, and from any place where the process of manufacture is carried on, either with or without, the aid of the machinery. If non-workers are admitted to the mill premises other than those above, it should be made incumbent on owners, who allow their admission, to provide for the proper guarding of all dangerous places,

Mr. A. Bockley.

wells, and tanks to prevent accidents. I am of opinion that it would serve no useful purpose in India to test samples of air, and to prescribe an analytical standard of purity of air in factories. A minimum of ventilation, proportionate with the size of the room, the number of people employed therein, and the process of manufacture carried on may, with advantage, be prescribed. It would certainly tend to the health of the operatives if a "maximum of humidity" commensurate with temperature be prescribed, due regard being paid to the process of manufacture carried on. It is absolutely essential, I think, that a standard of purity be fixed for water used for humidifying purposes. The water in the condensing water tanks of mills is, as a rule, foul, and unsuited to the purpose of humidifying. The present standard of latrine accommodation is sufficient. If separate urinal accommodation is prescribed it might be made use of by idlers, frequenting latrines for the purpose of smoking, etc , and in this way prevent overcrowding. If urinals are prescribed proper arrangements for flushing and draining should be insisted upon. It is highly desirable that all doors about any factory should be made to open outwards. The rules at present in force for fencing machinery are adequate. I think it essential, right, and fair that uniformity of administration should be secured throughout India so far as the general provisions of the Act are concerned leaving it to Provincial Governments to modify rules relating to hours of starting and stopping work, etc., to suit local conditions. I do not think full-time medical inspectors would be of much use in the *mufassal*. But in large cities like Bombay and Ahmedabad their employment would be desirable, especially if the duties of certifying surgeon were combined with those of inspection. Questions of physical fitness, and other matters requiring medical opinion, could be decided on the spot, and would be final. These inspectors would be more in touch with the children and young persons, and, I think, of great assistance in securing the observance of the Act. No statistics are available relating to production for hours of varying length, as this factory works regular hours, and has always done so. In the *mufssal* there is no difficulty in getting children passed within a day or two of employment, but in large towns such facilities for securing certificates do not exist. I think a period of seven days, from date of engagement, sufficient for securing certificates for children. I would suggest that the manager should within 24 hours of engaging a child or children send in a notice, under a prescribed form, to the certifying surgeon, apprising him of the fact. The certifying surgeon within 48 hours of receipt of such notice, to appoint a time and place for the examination of these children. Certifying and inspecting surgeons could divide the city into circles, or mills into groups, for facilitating the carrying out of their duties. With regard to half-timers maturing as full timers, I would suggest that within 15 days from the end of the month preceding that of maturity, the owner or manager send in a list of their names to the certifying surgeon, who would arrange for their examination as to physical fitness. These children should produce their age certificate at time of examination, which certificates would be cancelled, in exchange for new certificates or endorsed for physical fitness, and a register, as previously suggested, maintained in which these certificates would be entered. The certifying surgeon should arrange for the examination of this class of persons in the first week of the month during which they mature.

To overcome the difficulty suggested in this paragraph, and to prevent adults who have been refused certificates of physical fitness from finding full-time employment in factories, it may be laid down that no adult male, reasonably said to be under 18 years of age, be employed in any factory without a certificate of physical fitness. I am not in favor of forming a class of "young person," for reasons already given. It cannot be denied that the prescribing of hours for a class of young persons between the ages of 14 and 16 would, in ring spinning mills, have the effect of limiting the hours of work to the hours prescribed for this class. In mills where mule spinning is installed, the effect would be only partial stoppage of work. But, in weaving sheds, the effects would be scarcely felt. As it would affect mills differently, the prescribing of hours for young persons does not commend itself. Quite apart from this, I would not advocate the policy of legislating for one class of persons with the object and intention of affecting another class. The number of young persons employed in this mill is 325. It would be advisable to fix definite time limits under the Act, and I would suggest not before 5-30 A. M. nor after 8 P. M. for cotton mills. If the hours of adult labour are restricted by legislation, it may be left to local Governments to prescribe the hours of work to suit conditions generally obtaining in a particular district, but not to suit individual mills. I do not think it at all advisable to have Indian factory inspectors trained in England where conditions are entirely different It would be far better if factory inspectors were trained in India, and possessed a knowledge of the vernacular to enable them to make enquiries of operatives at first hand It has been pointed out that the operatives in Indian mills are 4½ or 3 to 1 as compared with mills in England, and the reason has been attributed to inefficiency on the part of the former. I desire to point out that this is not quite correct. The average "count" spun in England may be taken as 50s or thereabouts, as compared with 16s or lower in India. Indian mills therefore are laid out with a greater number of machines of the same class in the cycle of manufacture, as compared with English mills, necessitating the employment of a larger number of hands. Piece-work wages in England depend upon the raw material used, and by this arrangement, the manufacture or owner has to use good cotton or pay the operative for the extra work demanded of him in working up inferior material. In India the operative is compelled to work any material the owner thinks good enough, or can afford to put through, for the same scale of wages, whether good material or bad. The working up of good material has a good deal to do with the number of hands employed, the production and the waste made in a mill. In my opinion the Indian operative is not so inefficient as has been made out, and with good conditions to work under, regular hours of work and rest, and elementary education, he should advance considerably and prove a valuable asset to the mill owner.

Oral evidence.

Witness stated that the 325 children mentioned in his written evidence were between the ages of 14 and 17 years They had the electric light and worked a twelve hours day all the year round. They had never worked over twelve hours, and the one hour midday interval was a great advantage. The attendance on resuming work was just as good as when they started in the mornings. The firm provided the hands with biscuits and coffee at 6 A M. Some of the caste people did not take the coffee, but all ate the biscuits. A few took a small meal at 9 A.M. but they all had

their regular meal at 1 o'clock. They employed all castes, who worked beside each other. There was no scarcity of labour at Coimbatore, although at harvest time they were sometimes a little inconvenienced. They stopped the mill on pay day, the Saturday nearest the 15th for cleaning, and stopped also at the end of the month for stock-taking and cleaning. There was no work whatever on Sundays. Over and above Sundays, they gave about twelve native holidays, and he estimated the number of working days at 300 annually. In his opinion, if the operative took the holiday as a day of rest, it affected production beneficially; but many of the native festivals were not beneficial. As a rule the Sunday was a rest day, and the native festivals were holidays, but not days of rest. There was no drunkenness a few years ago, and what drunkenness there was now in the district was due to Government introducing toddy shops. One toddy shop had been placed in a village near the mill, and it had not benefited the village. He approved of a restricted twelve-hour day, but objected to the proposed "young persons" class, because it would not affect weaving sheds while it would affect spinning mills adversely. Spinning mills could work their weaving sheds independently of the spinning, and there were also one or two purely weaving mills. In certain circumstances it would be economical to run the weaving shed by the big mill engine independently of the rest of the mill. Witness had had sixteen years' experience of the cotton industry in India. The cotton mill in the Native State of Wadhwan used to run every hour, and every day, of the month without any stops. The hands were continually changing. It was a new mill in his day, with new machinery. At Virangam they worked by daylight. Witness much preferred the regular twelve-hour day, and considered that the men appreciated starting at a regular fixed hour. He had never tried two half-hour stoppages at 9 A.M. and 3 P.M., and he was of opinion that the hands preferred the present one hour midday interval. He thought they got as much out of the machinery at Coimbatore as at Virangam and the pay in South India was slightly better. They encouraged their men to attend regularly by giving them a bonus on all production above a certain limit, and by giving others a money prize for a full month's attendance. The majority earned the bonus or prize. If the men, for instance, obtained eight hanks off a roving frame and the firm wanted nine hanks, they would offer an additional 2 annas a day for the extra hank. As a rule the men worked up to the increased standard and quite 75 *per cent.* benefited by these concessions. A man could be absent on leave without forfeiting his prize, but if he absented himself without leave then he lost it. The firm adhered strictly to these rules and the labour kept to the mill. There had not been a complete change in the *personnel* since the mill was started. At present they were the only mill at Coimbatore, but others were being built. He considered that one examination for age should be sufficient. The Assistant Surgeon was their certifying officer and visited the mill when sent for. The mill paid for the certificate, which the mill retained. If the child left and later on reapplied for work, he was taken on on the original certificate. The mill had never been prosecuted so far for contravening the Act. He considered that the certifying Surgeon was strict in his examination; he rejected several children. Witness never employed a child before examination. In their case it was no hardship waiting a few days, but taking large cotton centres into consideration, there ought to be facilities for the weekly examination of children. No boy should be allowed to work unless he had a certificate of fitness. Children should be examined both as half-timers and at fourteen years. Witness always took physical fitness into account, even now. Quite recently two of their boys were found to be suffering from a disease of the heart and were turned out of the mill. He suggested the requirement of a physical fitness certificate as a necessary amendment to the Act. Their mill did not pay an additional fee to the doctor if he came to the mill for certifying purposes. With regard to the employment of children before certification, he considered that within twenty-four hours of employing a boy the manager should notify the Civil Surgeon to that effect and also send word that he intended to have him examined within one week. The children worked in six-hour sets, which changed fortnightly. He had never worked the three-hour sets for children. He had stopped non-working children from coming into the mill, without any adverse effect upon the attendance of the women. If necessary they allowed the mother to go out to nurse the child, and then return to work again. If the labour supply was limited, and a mill was largely dependent on female labour, he still thought that the difficulty could be met by setting apart a decent room for the non-working children. The women would not object to their children being left in this room in charge of some person. Children in arms were allowed in the Gujarat gins. He found that that was the practice when he was at Virangam, and he did not interfere with it. He disapproved of the custom, however, and felt sure that the women would not stop away altogether if they were not allowed to take their children into the mill. Concerning ventilation, he considered that full advantage would be taken of all mechanical appliances, and that the operatives would not shut them off. His experience was that the heat of the Indian climate was such as to cause all means of ventilation to be freely used. He preferred that a minimum of ventilation should be insisted upon, which would safeguard the health of the operative, rather than that of a fixed standard of purity should be laid down, which would be difficult of attainment in many old mills. In so far, however, as the suggestion merely meant the fixation of a maximum amount of carbonic acid gas, he would withdraw his objection to a fixed standard of purity. They had no humidifying plant at Coimbatore, and in the hot months employed *khus-khus tatties*. All their yarn was consumed locally. Owing to the difference of climatic conditions between Lancashire and India, it was difficult to express any opinion as to the comparative work performed; but taking machine for machine and allowing for the better grade of cotton used he did not think that the English operative turned out twice as much as the Indian operative. The English operative would not do more work in India than the Indian operative did, and *vice versâ*. Witness had not seen any improvement in skill, but the men applied themselves more if they were offered inducements to work.

Mr. A. Rockley.

Witness No. 223.

Mr. Walters, Special Inspector of Factories for the City of Madras.

The working hours of adult males should be limited. The physique of workers has been affected owing to employment in textile factories by long hours. If limitation of the hours

Mr. Walters. *Written evidence.*

Mr. Walters.

of labour is to be enforced, no adult male should be employed more than twelve hours a day including a reasonable interval of rest. The best method of enforcing the restriction would be to insist upon employers maintaining a register with the actual number of hours entered up each day worked by each worker. Where the shift system is not in force, it would be advisable to prescribe that the legal working hours be fixed from 1st April to 30th September 5-30 A.M. to 5-30 P.M., and from 1st October to 31st March from 6 A. M. to 6 P.M. The engine should be stopped for an interval between noon and 2 P. M Factories working on the day shift system—the legal working hours therefore should be fixed from 5 A. M. to 8 P. M. provided that no adult male be employed for more than 12 out of every twenty-four hours with a reasonable interval of rest included. No alternative in my opinion is necessary. The illegal employment as adults of persons between the ages of 9—14 years has not been noticed on a large scale. Proceedings were instituted in the Presidency Town Court in connection with the suspected illegal employment as adults of persons between the ages of 9—14 years, one case was dismissed by the Magistrate, and in the other case the Magistrate's verdict was in favour of the inspector but was reversed on appeal to the Madras High Court. It is not advisable to create a class of young persons. A special register of all workers under 16 years of age should (provided an age limit be fixed as to what age a half-timer can be promoted to a full-timer) be maintained in order to facilitate inquiries as to age and physical fitness therefore. The employment of women in factories before sunrise and after sunset should be prohibited. The minimum age of children allowed to work in factories should be raised from 9—12 years. Certificates of both age and physical fitness should be required from children before their acceptance to work in factories. Promotion of workers from half to full-timer would be met if the original certificates were endorsed as to their physical fitness. It should be prescribed by law that the employment of children shall only be in regular sets—forenoon and afternoon. The working of the children by the double set system should not be allowed. It should not be made compulsory upon owners of factories to provide elementary education for workers in their employ. The education of children or workers would be better accomplished outside factories. The introduction of a rule prohibiting non-working children from accompanying workers to dangerous or unhealthy parts in factories should be made. The owners should be held responsible for the presence of such children found by the inspector in any part of a factory except in places provided especially for their accommodation To prescribe an analytical standard of purity of air in factories, samples should be taken as occasion arises from time to time and analysed with the object of arranging sufficient ventilation For the purpose both of manufacturing processes and the health of workers, a standard of moisture should be set up. A fixed standard of purity for the water used for humidifying purposes should be maintained. The latrine accommodation should be raised to one seat for every 25 workers and separate urinal accommodation should be insisted on.

All doors of work rooms should be arranged so as to open readily from the inside outwards in case of fire, and provision should be made to lock them from the outside after work has been stopped each day and only after all workers have left the various work rooms. Doors that are required to be fitted between work rooms should be of the plate iron or steel sliding pattern and so fitted that they can be readily and easily opened from either side in case of fire. No further precaution for the fencing of machinery in any factories is necessary. Arrangement should be made to secure uniformity in the administration of the Factory Act in this Presidency, but it is not necessary that the administration be controlled by authorities outside this Presidency To obtain the due observance of the Factory Act, it is expedient that a full-time medical inspector to assist the present inspector be appointed.

Oral evidence.

Witness stated that he was appointed Inspector of Boilers, in 1897, for Madras City. In 1900 the duties of Factory Inspector were added, and since then he had been appointed Boiler Inspector for the Presidency He had now to inspect 700 boilers, compared with 150 formerly; there were also 35 factories in Madras employing 16,000 hands. He had one assistant for the boiler inspection work, but no assistant for the factory inspection. He did the factory inspection work in Madras himself. He inspected each factory quarterly, and if he went to any factory primarily to inspect boilers, he also made a cursory examination for purposes of the Factory Act. He was absent from Madras for about five months altogether in the year, but he so arranged his Presidency boiler inspection work as to be in Madras at least once a month. He considered the present arrangements for inspection satisfactory; he was able to inspect the factories properly. There were only four large factories, employing a large number of hands, and the remainder were small ones, employing from two hundred to three hundred hands. Prosecutions under the Factory Act had been instituted in Madras by the medical inspector for contraventions of the Act discovered in the course of joint inspections The law in regard to children was not infringed in Madras on a large scale. Judging by what he saw during the inspections made by the Commission he could not say that the law in respect of the employment of children was strictly enforced. Under present circumstances it was very difficult for the inspector to detect any evasion When he inspected a mill all the young adults, of doubtful age, working full time, would move from room to room and keep completely out of his sight. It was easier to detect children under nine years working as half-timers because in the small mills he had the half timers paraded in a body and in the large mills room by room. The half-time system was not abused in all the mills, and it was only rarely that under-age children were employed. A prosecution for employing an under-age child had failed owing to the disagreement of the doctors concerning the child's age. In his opinion mill children were not up to the standard of children in outside employments, and after eighteen months of mill work there was a visible deteriorat on in their health. He advocated placing the minimum age for children at twelve years. In the interval before they would obtain mill employment, outside work would be better for them than mill work while they would be fed just as well. The children could not stand the constant strain of mill work, and therefore they were always dropping out and changing their employment. There was no artificial light in the Madras mills. He did not consider that the Madras Power Station worked long hours, though at this place the boiler men might have to come earlier and finish later. By the words "long hours" in his written evidence he meant fourteen and

fifteen hours, and upwards, a day. Personally he considered twelve hours a day too long for the Indian climate. The adults in textile mills were, in his opinion, below the physique of outside labourers, and in spite of the eleven hours' work of the Buckingham and Carnatic Mills he did not think that the operatives there presented the appearance of strong able-bodied men. He considered it questionable whether the operatives always got their full half-hour interval at present and he approved of a longer midday interval. Speaking generally, textile mill labourers were inferior in physique both to agriculturists and to other factory labourers. He was prepared to show men in other factories—such as printing presses and iron works—who were superior in physique to textile mill operatives. Printing presses and iron works had a shorter day, and gave a longer midday interval, while in the cotton mill there was a continual mental strain. It was laid down in the Act that the inspector could be accompanied by assistants for inspection purposes, but no provision was in practice made for any assistance. This should be clearly specified, as if he asked police constables to accompany him they would reply that it was not part of their duty. The mill schools in Madras were not abused, although inside the compound He objected, however, to schools on the premises, even if they had an outside entrance. A child should be presumed to be at work if he were found in the compound outside the hours fixed for his set, Witness thought that form D in the rules under the Factory Act should be enlarged so as to cover a period of one month, which would facilitate the calculation of the children's earnings and also be of advantage in other ways. As a rule these forms were kept up to date. It was not the custom to bring back some of the morning set children to do a few hours' work in the afternoon, and if this practice existed it could easily be stopped. A boy could not work in the morning at one mill and at another in the afternoon, owing to the distance the mills were apart. The half-hour interval was not sufficiently long to enable him to traverse the distance. Concerning the four-anna medical examination fee, witness said that often the children were made to work for a day or two to earn that money, before being sent to the doctor. This was because the children often had no money, and then the mill would not be the loser in case the child was rejected. As a rule the mill recouped itself for the fee out of the child's earnings. The mill retained the certificate, which the child could claim on leaving, but it was not usual to ask for the certificate, and the child was usually re-examined on going to another mill. If the boy retained the certificate it would soon get dirty and torn; but this might be got over by using parchment or stronger paper. It was not his opinion that the certificates were kept back in order to make it more difficult for the child to obtain employment elsewhere, and he had never heard of a case of a child being refused his certificate on demand. He approved of Sunday being observed as a holiday; some of the Madras mills did so now. Cleaning was always done during work hours and the hands were not called in on Sundays for this. Witness advocated the insertion of a provision in the Act requiring owners of factories to notify the laying down of new machinery. If such machinery were introduced the day after an inspection, three months would elapse before the inspector knew anything about it, or could see that it was properly fenced. Mr. Walters.

Witness No. 224.

Lieutenant-Colonel Thomson, I. M. S., Sanitary Commissioner, Madras.

The working hours of adult males should be limited to not more than twelve hours daily, including an interval from half to one hour between 12 noon and 2 P. M. for meals. To enforce the restriction as to working hours, the hours for work should be specified in the rules framed under the Factories Act. I am not in a position to say whether there has been physical deterioration as the result of the illegal employment, as adults, of persons between the ages of 12 and 14. I consider it inadvisable to create a class of young persons; a special register of all workers under the age of 16 should be maintained in order to facilitate inquiries as to physical fitness of the youngest adults to work full-time. The employment of women at night should be prohibited The minimum age at which children are allowed to work in factories should be raised to 12 years. A person between 12 and 16 years of age should be considered a child; from 16 upwards an adult. This should be defined in the Act. Certificates of both age and physical fitness should be required before children are allowed to work in factories. Before children who have hitherto worked half time are allowed to work full time as adults, certificates of age and physical fitness to work full time should be required It should be prescribed by law that children shall not be employed except in regular sets—morning and afternoon sets. I do not think double sets should be permitted; as a means for the infringement of the law would thereby be afforded, children being kept at work for longer periods than are suited to their age. Factory-owners should not be obliged to provide elementary education at their own expense for children working in their factory, nor should any school be conducted within the factory. A rule should be made prohibiting non-working young children from accompanying workers to dangerous or unhealthy parts of factories. A separate place should be provided in the factory in which children could be shut up while the parents or guardians are at work. Samples of air taken from factories in India should be regularly tested to prescribe an analytical standard of purity for air in factories with a view to secure proper ventilation. An attempt should be made to prescribe a standard of moisture for the air of factories with reference both to the manufacturing process and the health of the workers. The water used for humidifying purposes should be of a fixed standard of purity. Latrine accommodation should be raised to one seat for every 25 workers and separate urinal accommodation should be insisted upon. The sexes should have separate latrine and urinal accommodation. All doors of work rooms should open from inside outwards in case of fires; doors separating rooms should be swing doors. I cannot say whether further precautions are necessary for fencing machinery in any factories or class of factories. Arrangements should be made to secure uniformity in the administration of the Factory Act throughout India. Full-time medical inspectors of factories should be appointed to assist the present inspectors in securing the due observance of the Act. Lieut.-Col. Thomson I. M. S. *Written evidence.*

Lieut.-Col. H. Thomson.

Oral evidence.

Witness stated that he had nothing to do with factory inspections, of which he had had experience only as a district medical and sanitary officer. He approved of a fixed twelve-hour day, on general grounds. He did not think that any man should be asked to work longer hours. He considered that the minimum age for young children should be raised from nine to twelve years, as very often the child of nine did work that was too heavy for him. If they could not work until twelve years of age, the large majority of them would go to school; it was not at all probable that they would be employed in harder work outside. Witness was advising officer to Government in respect of sanitary work; he had nothing whatever to do with mill sanitation. He received no reports upon the sanitary condition of factories. He considered that the latrine accommodation should be one seat for every twenty-five workers; one in fifty was certainly not enough. He gave this opinion from his general experience, and not from any special acquaintance with factories.

Witness No. 225.

Mr. A. Alexander, manager of the Buckingham Mill, Madras.

Mr. A. Alexander. Written evidence.

I am mill manager with the Buckingham Mill Company, Limited, Spinners and Manufacturers, Buckingham Mill, Perambore, Madras. We had in our employ on the 12th February the following number of hands:—

Men	3,880
Women*	77
Children	920
Total ...	4,377

*Brick-layer women employed on building operations only.

A statement is appended showing the average hours *per* day, and the number of days worked *per annum*, for the last ten years at the above mill. We have no statistics showing the effect of working days of varying length on production as we work the same length of time daily, *viz.*, 11½ hours The only time limit during which a half-timer should be allowed to work without a certificate is in my opinion, the period between his entertainment and the convenience of the certifying surgeon to come and certify him (or alternatively the half-timer to go to the certifying surgeon). Any other period is likely to be abused as the light work to which half-timers are put does not need qualifying for. Certifying surgeons should be appointed to attend at the mill at fixed days, twice weekly in order to secure the granting of certificates with reasonable despatch. Assuming that the "physically fit" recommendation becomes law, I do not think that there would be any difficulty in applying it in practice, with efficient factory inspection. In my opinion the way to prevent half-timers who have been refused full-time certificates at one mill from going to another to work full-time, is for—

(*a*) Factory owners to send all applicants for full-time employment, about whom there could be any reasonable doubt as to legal age, to the certifying surgeon, before employing them.

(*b*) Factory owners to grant certificates to all full-timers under 16 years of age who leave their employ, stating that they are qualified to work full-time. Such certificates to be demanded from the child by the employer next entertaining him. I do not consider that it is necessary to create a special "young persons" class as I do not find that persons working as adults over the age of 14 suffer from any ill-effects of over work. We have at present about 700 persons (or 20 *per cent.*) working who would come under this class, and any legislation restricting the number of hours worked by them would seriously affect the working of the mill. I am of the opinion that definite time limits should be imposed beyond which operatives cannot be legally employed. I am not aware of any special circumstances which demand exceptional treatment in connection with the cotton manufacturing industry.

I do not consider that it would be expedient to obtain factory inspectors from England, as the conditions of labour are entirely different in this country. Practical men in the country who have experience and knowledge of the people, with a short period of training with the British manufacturers would be the most suitable men. I am of the opinion that, if any further law is introduced in connection with the Factory Act, it should be definite in its actual operations, no elasticity being needed. Any penalties might have a wide scope to enable the convicting Magistrate to impose either a severe, or nominal sentence according to the circumstances under which any infringement might take place I do not think it necessary to provide house accommodation for factory operatives. I have never heard of any request for the same on the part of the employees I consider that the working hours of adult males should be limited. The physique of workers has not been affected by the hours which we have worked, eleven and a half hours a day being the longest period. I consider that a twelve hours working day should be the extreme limit, say from 6 A.M. to 6-30 P.M. with half an hour's stop between 11 A.M. and 1 P.M. for meals. A "young persons" class is not required as we do not find any physical deterioration in young persons over 14 years working as adults. A special register of persons under 16 years of age is not required. A record of half-timers up to the age of 14 is sufficient as maintained under the existing Act. The employment of women at night should be prohibited. I do not consider the minimum age at which children can be legally employed in factories should be raised above 9 years. Their work in the mill is very light and if the present minimum was raised they would certainly be put to more arduous duties outside, where the Factory Act could not reach them. Certificates of both age and physical fitness should be obtained before a child is allowed to work, of course reasonable time being allowed for inspection. Both certificates should be obtained before a half-timer is qualified

to work full-time as an adult. Children should be employed in regular alternate sets, morning and afternoon, changing monthly. Elementary education is a step in the right direction and would eventually create a better class of employés, but factory owners should not be compelled to provide the same at their own expense. Every inducement pecuniary and otherwise should be offered for them to do so, it would reach a class of children who do not as a rule receive any. Non-working young children should not be allowed to accompany workers to any part of the mill premises. In the event of a law being enforced prohibiting them from so doing the factory owner should be held liable for any infringement. I do not consider it necessary to prescribe an analytical standard of purity for air in factories. The system adopted to secure proper ventilation to be left to the judgment of a practical factory inspector who would have power to call in a medical officer when necessary. The standard of moisture for the air in factories could also be left to the judgment of the chief factory inspector. For humidifying, water that is used for ordinary domestic purposes or condensed water from the boilers should be considered pure enough. Latrine accommodation should be in proportion of 1 to 50 workers with separate urinal accommodation. All doors to rooms where a number of hands are employed should be hung so as to open outwards. The ordinary fencing to machinery now being supplied by makers generally is sufficient. Old machinery unfenced should be brought up to date. Mr. A. Alexande

The administration of the Factory Act should be uniform throughout India. This would put manufacturers of any one class on the same basis throughout the country. Due allowances to be made for any special circumstances which may arise. Any local fully qualified medical man could be appointed to assist the present inspector in securing the due observance of the Act, as occasion required.

Statement of hours worked.

	Days.	Average hours per day. H.	M.
1898	311	11	43
1899	311	11	36
1900	313	11	33
1901	294	11	33
1902	312	11	31
1903	310	11	30
1904	313	11	28
1905	313	11	31
1906	305	11	27
1907	307	11	25

Oral evidence.

Witness stated that he had had thirty-five years' experience of the cotton industry—nineteen at home and sixteen in India. With the exception of nine months at their Bangalore mill, he had spent the sixteen years at the Buckingham Mill. He had no experience of long hours, other than the thirteen-hour day at Bangalore. His experience in Madras was that, while they had reduced the length of the working day by three-quarters of an hour, there had been no decrease in the total amount of production. Originally they worked in the long days from about 5-30 A.M. or 5-40 A.M. to 6 20 P.M., with half an hour's interval, which gave about 12½ hours of actual work. This had been reduced later on to the present 11¼ day, which had been in vogue for seven years, and the production was better now than before. He attributed this result to improved machinery, better supervision and increased application of the operatives. They had no difficulty in keeping the Bangalore hands up to their work, but as a class they were not equal to the Madras men. He approved of restricting the working day to twelve hours, as he considered that an Indian cotton mill could not be run economically for a longer period. This opinion was only given with reference to the cotton industry. He saw no necessity for the proposed "young persons" class, as the young persons were sufficiently well protected by the present law. It was always the custom in cotton mills to give the young adults lighter work than that performed by men of mature age, and a boy of fourteen years was quite capable of working for twelve hours. It should certainly be stipulated that the young adults should not work beyond twelve hours. The present Act had been abused in so far as the provisions relating to children were concerned, and there would be quite a different state of affairs now if the present Act had been properly enforced. He considered that the physique of their operatives was equal to that of people in outside employments. Their sick list only amounted to ·66 *per cent.*; absentees from various causes to 5 *per cent.*; and absentees on leave to 6 *per cent.* of the total staff. He agreed that the Act could be properly enforced if facilities were provided for the weekly inspection of children. They sent from 70 to 80 children every month in batches of 25 or 30 for examination. The children were constantly changing from mill to mill. Their parents seemed to think there was some advantage in their doing so, and perhaps it was because they stood a chance of getting a few pice more a day at some other mill. He felt convinced that *dasturi* had been reduced to a minimum in the Madras mills. When the child went to a new mill he had to be re-examined, because the Medical officer held that there was no guarantee that any child was the same child that he had passed previously. Now that the thumb impression had been introduced, this might be taken as sufficient identification, and subsequent examinations for age dispensed with. He considered that the certificate should be retained by the mill, and presented to the Medical Officer when demanded. In the first instance all their boys did possess their own certificates, but with constant handling the paper would not last more than six months. He approved of a second examination at fourteen years, to see if the boy was fit to work twelve hours a day. If the parents knew that full-time employment depended upon passing this second examination, they would be more particular in feeding their children properly. It was not the custom in Madras to work half-timers on full time, though some years ago the law in this respect was probably abused. Half-timers were, of

Mr. A. Alexander.

course, anxious to get on full-time employment in order to earn the extra money. The boys themselves paid the examination fees Witness would not accept a horoscope instead of an age certificate, and he was not aware of horoscopes being accepted in Madras mills. There was no Government rule giving mill managers power to accept horoscopes. The half-timers earned about two annas a *day*, and the full-timers about four annas. Two years ago, they dispensed with female labour, but for ten years previous to that they had never allowed non-working children inside the mill. This rule had not interfered with the attendance of the women. In his opinion a regulation prohibiting non-working young children from accompanying their parents would not interfere unduly with the supply of female labour. Non-working children were not allowed in Lancashire mills, where fully 40 *per cent.* of the women workers were married. He approved of the hours of work in cotton mills being uniform for each province. So far as Madras was concerned, there ought to be a fixed day for all the year round, but if other provinces wished to give a long midday interval, he had no objection to a proposal to allow twelve hours' work within definite fixed hours. Originally they gave more native holidays, and worked on some Sundays; but now they gave all the Sundays, and fewer native holidays. The present system meant four additional days' holiday in the year, but the mill had not lost in production thereby; as, in his opinion, if there was a holiday the piece-workers always tried to make up their average monthly earnings. Seven *per cent.* of their workers were Mohammadans and the mill made the *Muharram* a holiday. On other Mohammadan festivals the Muhammadans took leave, and the mill did not stop. There was no inconvenience through absenteeism on Mondays, but after pay day and native festivals there was always a little difficulty. He considered that the operatives indulged in drink, and that a certain amount of sickness could be attributed to this. He approved of all doors—where they did not have sliding doors—being made to open outwards. Their half-timers were employed on the six-hour shift system, and he considered that the three-hour shift system was open to abuse. It was also possible to use the school as a labour-supply depôt if it were situated inside the compound. Fifty *per cent.* of their children went to the mill school, and were actually taught. As a rule, the employés were of low caste. He had noticed a vast improvement in skill and in his opinion a regular mill class of artisans was growing up. Mill wages were much higher than agricultural wages. On the land a man could earn about Rs 7, and in the mill Rs. 14; while skilled mill labour obtained Rs. 30 and upwards. They had now no mule spinning, having got rid of some old-fashioned mules some 9 years ago.

Witness No. 226.

Mr. A. J. Yorke of Messrs. Parry and Co., Madras.

Mr. A. J. Yorke. *Written evidence.*

I represent:—

(1) A sugar factory and distillery at Nellicoopam, employing on an average daily 827 men and 60 women.

(2) A sugar factory and distillery at Samalkot, employing on an average daily 315 men and 4 women.

(3) A sugar factory at Kulasekharapatnam, employing on an average daily 170 men and 44 women.

No children are employed and women only to a small extent for unskilled cooly work of a light nature. All these factories work the whole 24 hours, sugar making and distilling being continuous processes. The third factory was only started last year. The other two have been at work for over 10 years, and work all the year round, save for perhaps a fortnight of native holidays. The average number of hours worked per cooly in each factory is as follows :—

Nellicoopam.

8 hours shifts	...	111	
9 „ „	...	669	887
10½ „ „	...	107	

Samalkot.

6 hours shifts	...	89	
8 „ „	...	115	
10 „ „	...	103	319
12 „ „	...	12	

Kulasekharapatanam.

8 hours shifts	...	10	
12 „ „ with 2 hours off	...	204	214

We find it desirable, and in the interests of the work, to limit the number of hours of work for the operatives, and I do not think there is any necessity for legal restrictions. The Indian is well able to look after himself, and if asked to work longer than he finds comfortable, the cost of supervision to get work out of him becomes more expensive than employing him shorter hours. For the reason just given, I do not consider it necessary to legally limit the number of hours that men should attend. Our practice is, in all cases of work requiring close attention, or otherwise of an arduous nature, to work 8 hours shifts. It would be impossible in a sugar work to stop the

engines between noon and 2 P.M. For the reasons given above I deprecate the prescription by law of fixed working hours. I have seen no trace of physical deterioration through the illegal employment as adults of persons between the age of 12 and 14. On the contrary, so far as our factories are concerned, it is my experience that employés always put on flesh. I do not consider there is any occasion to keep any special register of workers under the age of 16. In our factories we do not employ women at night. There is no necessity in our experience to take any steps as regards ventilation of sugar factories in India, as they are always quite airy. The existing latrine accommodation and arrangements appear to fully meet requirements, and so far as concerns Indian sugar factories, which are built in a straggling kind of way with easy access to the open air in all directions, employés are never likely to be inconvenienced. Comparatively few of the doorways in sugar factories are closed and the danger of fire is practically nil, so that in my opinion no occasion arises for prescribing precautions as to the hanging of doors. Speaking generally, in my experience, machinery is sufficiently fenced in all Indian factories with which I am acquainted. I have known no inconvenience from lack of uniformity in the present administration of the Factory Act in India. I do not consider that full-time Medical Inspectors of Factories are required to assist the present inspectors in securing due observance of the Act. I should deprecate legal interference with the hours of adult labour for the reason already given If, however, legal restriction of the hours of adult labour should be considered necessary, it would be essential for the conduct of the sugar industry to fix a maximum number of hours, leaving it to the discretion of each individual employer to settle the time for commencement and termination of each day's work. I have already mentioned the only special circumstance demanding special treatment in connection with the industries in which I am interested, *i.e.*, both sugar making and distilling are continuous processes. I do not consider there is any necessity for Inspectors to be obtained from, or to receive a training in, England. I would certainly favour elasticity in any law that may be enacted, but deprecating as I do any more stringency than at present, I am unable to make any suggestion as to how such elasticity should be provided without full knowledge of the restrictions that may be contemplated. I have no suggestions to make as to housing factory hands. If they are not housed to their satisfaction the necessary labour is not forthcoming.

Mr. A. J. Yorke.

Witness stated that all their sugar factories and distilleries came within the definition of continuous process works; the work went on day and night. There were, however, certain parts of the factories where the processes were not continuous, and it was there that the nine and ten hour shifts were in vogue. In all the departments that went on for 24 hours they employed eight-hour shifts. It was very unusual to work any operative for twelve hours, though witness would not say that this did not occur occasionally in isolated cases. If there was any tendency to abuse as regards excessive hours of labour, witness would not object to a restriction of hours. A twelve-hour day would not affect their industry, and he approved of such a working day, if employers were allowed to arrange their own hours within the twelve-hour limit. He understood that the twelve-hour day would not mean a hard-and-fast restriction. Occasionally there might be a mistake as to the actual hours worked, and if the manager could prove that it was the exception, and not the rule, to work over the legal time, then his explanation ought to be accepted. The women worked the daylight hours only, and were not employed in the continuous process departments. They came and went as they liked, and the existing law providing for their one and a half hours' interval was not strictly observed. It was probable that they did in fact take one and a half hours off each day. The men who were not engaged in continuous process work also obtained one and a half hours off in the course of their twelve-hour day. Witness had not seen any underage children employed as adults. Occasionally the managers noticed a boy under 14 years of age on full-time work, and this would then be immediately stopped. Strict orders had been issued to this effect. Witness had had no experience of factories which worked from 14 to 16 hours by one shift. The continuous process departments were specially exempted from stopping on Sundays, and in one factory they had an exemption allowing women to work at night. Lately they had introduced machinery in that factory, and women were not now required to work at night. It was the practice in the Samalkot factory to work six hours, and then have six hours off, making twelve hours in all in the day. It might occasionally happen that a day-shift man would work on during the night, but such an occurrence would be very exceptional. They worked on Sundays just as on other days. There were ten native holidays during the year, and also four additional days, but during these 14 days the whole factory did not stop. There were no other holidays, apart from these native festivals; and the working days were about 350 in the year. The minimum wage for women was 3 annas a day. The male operatives who were paid by the month obtained from Rs. 15 to Rs. 20 and upwards. In his opinion the men were regular in their attendance, and steady at their work. They remained with the firm for years at a time. As a rule, labour was not scarce, but during harvest time a few hands who had an interest in land would leave. As their factories were worked by shifts, they did not have the half-hour interval between 12 and 2 P.M. The majority of the hands took their meal at the end of their shift, and there was also a big exodus about 1 o'clock. The medical inspector paid quarterly visits. They had a certain amount of coolie accommodation, but as a rule the men resided where they liked. There had been very few accidents, and these had been the result of carelessness. Latrine accommodation was provided, and as a rule the hands used the latrines. If the latrines were insufficient, it would not inconvenience the men, who would use the fields close by. Covered evaporators were used in the factory, except a few shallow open vessels called concretors which were in the open, and were well off the floor, so that there was no danger of persons falling into them. A considerable amount of steam was generated from these evaporators, but it was not dense, and did not inconvenience the workers.

Oral evidence.

Witness No. 227.

Mr. D. Miller of Messrs. A. & F. Harvey, Tuticorin.

Mr. D. Miller; Written evidence.

The working hours of adults should be limited. The mills under our control do not work over 12 hours daily on the average. The physique of the workers has not been affected. I con-

Mr. D. Miller.

sider the maximum number of working hours should not exceed 12½ daily and that, except when working by shifts, the legal working hours should be between the hours of 5 A.M. and 7 P.M., provided that the total number of running hours should not exceed 12½. Some latitude as to the exact hours of starting and stopping is necessary to suit local conditions. The engine should be stopped for half an hour between noon and 2 P.M. In factories working by the day-shift system the hours proposed—5 A.M to 8 P.M.—would be suitable. No physical deterioration has taken place in the case of workers engaged in our mills. On the contrary their physique, more especially that of the children, has improved of recent years—due in my opinion to good and regular wages enabling them to obtain a sufficiency of food. I do not consider it advisable to create a class of "young persons," as I think the system would be found unworkable. The employment of women at night is inadvisable, except possibly in the case of ginning factories which only work for a few months during the year. I do not consider that the minimum age of children should be raised beyond nine. The work imposed on them is light, and if not employed in factories they would probably be engaged on harder work with poorer pay under less sanitary conditions. Certificates of age as will as physical fitness should be required.

I do not consider that second certificates before working as full-timers are necessary. Children should be employed in regular sets; one set in the morning and another set in the afternoon. In my opinion factory owners should not be compelled to provide elementary education. Non-working young children should be prohibited from accompanying workers to dangerous parts of factories. This rule should not however apply to reeling women who have, in many cases, young children to look after, and there is no risk attached to the children accompanying their parents to this department. From my point of view testing samples of air from factories is unnecessary. One seat for every 25 workers (50 workers ?) has in my experience been found ample, and I do not consider separate urinal accommodation necessary. All doors other than fireproof, as prescribed by the Insurance Companies should open outwards. The present fencing precautions for machinery are sufficient. Arrangements should be made to secure uniformity in the administration of the Act throughout India. Under the conditions ruling here, full-time medical inspectors are unnecessary. My firm represents the Coral, Madura and Tinnevelly Mills Coys, Limited, employing:—

	Coral Mill.	Madura Mill	Tinnevelly Mill.
Men ...	955	974	520
Women ...	379	318	204
Children ...	361	472	226
Total ...	1695	1764	950

During the past 10 years none of these factories has worked over 12½ hours a day. So far as I can now ascertain the average daily number of hours has been about 11¾ during that period As our factories work practically a uniform length of day throughout the year, I cannot provide statistics showing the effect of working days of varying length. I would suggest that a reasonable period during which an employé should be allowed to work pending examination for a certificate would be one week. The arrangements for medical examinations in this district are satisfactory. It appears to me that should effect be given to the suggestion that no half-timer should be permitted to work as an adult unless medically certified as physically fit for full-time work, considerable hardship might, in many cases, be inflicted on the employé. No employer of labour is likely to employ a workman incapable of performing the duties required of him, and while a workman's physique might not be of the strongest, to debar such an one from earning a wage on which he was dependent for a livelihood would certainly be a hardship. Even in the case of malignant or contagious diseases a certificate would be unnecessary, as it is most improbable that persons so affected would be employed, and I am of opinion that the matter is one which might well be left to the discretion of the employer.

I am not in favour of the suggestion for the creation of a class of "young persons" as in the United Kingdom. Young persons between the ages of 14—16 form a large and important proportion of the hands employed in factories, and unless they are permitted to earn a full working wage the probability is that they would have recourse to other forms of employment where no such restriction was enforced. In addition, presuming their hours of work were limited to say 8 or 9 hours daily, this would mean that machines under their charge would require to be stopped for the remainder of the day, consequently the hours fixed for this class of workers would practically determine the hours during which the machinery would run. In the factories under our control not less than 1,000 such "young persons" are employed. I am therefore of opinion that the creation of a further class of workers, beyond those now existing, *viz.*, full-timers and half-timers is impracticable, and would most seriously affect the interests of mill-owners as well as operatives. Assuming that it is eventually decided to restrict the hours of adult labour, it would be preferable to fix the maximum number of hours during which an operative could be legally employed between the hours of 5 A.M. and 7 P.M. leaving it to the discretion of individual employers to settle the time for the commencement and termination of the days work.

NOTE.—Mr. Miller was not called for oral examination.

WITNESS No. 228.

M. R. Ry. S. Marisiddappa, Bellary.

M. R. Ry. S. Marisiddappa. *Written evidence.*

The factory is called Sindigi Marisiddappa, etc, Gaveppa Ginning Factory. Our factory contains 12 gins (double roller) together with boiler and engine. At the time the ginning takes place 20 men are employed for bringing *kapas*, oiling the gins, shafting, machinery, etc., and pressing cotton; 38 women are employed for putting *kapas* into the gins, bringing *kapas* from outside

the gin-rooms, and removing cotton seed from the gin-rooms into godowns outside; 8 boys or girls of the age 12 or 14 years are employed to remove the cotton from the gin-rooms outside. Besides these, there will be one fitter, one engineer, and two extra men for watching. There will be altogether about 70 consisting of adult males, adult females, and boys or girls over 12 years of age. From 1st March up to the end of May, the ginning factory will be working if the cotton crop is good. When the cotton crop is poor, as it was during the last three years, the factory will work for about thirty or forty days. In the 1st year, namely, in 1905, our gins worked for eight days. The year before the last we worked our gins for about forty days during March and April. Last year we began to work in February and stopped in March after working for thirty days. This year we have not done any ginning work up to the present time owing to the cotton crop being poor. The ginning will be begun at 6-30 A.M. and will be stopped at 6-30 P.M. A person in the ginning factory works for 11 hours during day time. An interval of one full hour from 12 noon will be granted for rest for all persons working in the gins. From the last three years we have never worked our gins at night time after sunset. I am not in favour of bringing the ginning factory under the Factory Act. My reasons are as follows. Bellary is a district noted for its famines and scanty rains. A ginning factory has not worked even for two months in the last three years; and there is no possibility of working even for a fortnight this year. Even if there is a fall of 20 inches of rain in Bellary, the cotton crop will be very meagre, and when there is about 25 or 30 inches of rain, then only the cotton crop will be good. When the cotton crop is good the gins will be worked for about two months and not more than that period. Once in twenty or twenty-five years there will be about 25 inches of rainfall. Fifty years ago the rainfall here was very nearly 35 inches every year. But now it has dwindled down to about 15 or 19 inches now-a-days. Therefore I disapprove of bringing the ginning factories under the Factory Act. The employment of women at night should be prohibited in my opinion. Only during day time they could spare their time. With one child at least women are totally unfit for work at nights. When they are encumbered with more children than one, they cannot be expected to work during nights. I don't think that any special provisions modifying the general law would be necessary when ginning factories are not brought under the Factory Act. The shafting need not be cased in between the drums. Women may work in the front of the opener without any danger; especially our native women are not clad heavily like Europeans. There have been no accidents in our ginning factory for the last three years. The only accident was that corrugated iron sheets of roofing were blown up three years ago by a heavy gale. As our factory is outside the town there was no damage to any one.

Mr. Marisiddappa.

NOTE.—The witness did not attend for oral examination.

WITNESS No. 229.

M. R. Ry. A. L. A. R. Somasundram Chetty, Agent, Malabar Spinning and Weaving Company (Limited).

The working hours for adults should be limited. In my opinion the physique of workers would be affected by long hours if they work continuously, but it is generally found that working them long hours tends to make them very irregular in attendance. The number of hours should be fixed at 12 hours a day exclusive of intervals for meals and rest. It is not desirable to fix the hours of starting or stopping. This should be left to the convenience of the parties concerned. The engine should be stopped for one hour between noon and 2 P.M. except when not working the full 12 hours. I do not think the shift system should be allowed as this would give an opening for working the men longer than the prescribed hours. I do not consider that there is any necessity for the creation by law of a special class of workers intermediate between the half-timer and the adult. I do not consider it disirable that the special register of all workers under the age of 16 should be maintained nor is it necessary. The employment of women at night being not necessary in cotton mills should be prohibited, but they should be allowed to work in ginning factories. The minimum age at which children are allowed to work in factories should not be raised beyond 9 Certificates of both age and physical fitness should be required before children are allowed to work in factories. Children who have hitherto worked half-time should be allowed to work full-time as adults without certificates of both age and physical fitness being required again. It should be left to the discretion of the employer as to how the children are employed. I do not think that elementary education for children working in factories should be provided by law. A rule prohibiting non-working young children from accompanying workers to dangerous or unhealthy parts of factories should be made. A shed should be set apart in the mill compound where such young children may be kept if necessary. Arrangement should be made to secure uniformity in the administration of the Factory Act throughout India including Native States. Full-time medical inspectors of factories should not be appointed to assist the present inspectors as I consider that the present arrangement acts very well and no change or addition is necessary so far as medical inspection of factories are concerned. The factories represented by me are the Malabar Spinning and Weaving Company (Limited), Kallai, Malabar, and the Kaleeswarar Mills, Limited, Coimbatore. The latter is under construction and in the former there are 420 men, 15 women and 12 children. We have never worked the factory over 12½ hours a day. Our daily average number of hours are as follows: from 1899, 11 *h* 30 *m*; 11 *h* 33 *m*; 11 *h* 30 *m*; 11 *h* 30 *m*; 11 *h* 33 *m*; 11 *h* 29 *m*; 11 *h* 32 *m*; 11 *h* 30; and 11 *h* 33 *m*, respectively.

M. R. Ry. A. L. A. R. Somasundram Chetty. *Written evidence.*

NOTE.—The witness did not attend for oral examination.

Mr. F. C. R. Monk, carding master, Carnatic Mill, Madras.

Witness stated that he had had 29 years' experience in the cotton industry in the Buckingham and Carnatic Mills; he had had no training at home. The hands were half Hindus and half Pariahs, with a very few Muhammadans. The operatives were recruited from the coolie and cultivator class in the district around Madras, and many of them had worked in the mills for years. There had been no deterioration in health of either adults or children. The children were well fed

Mr. F. C. Monk. *Oral evidence.*

Mr. F. C. E. Monk.

when in employment they attended regularly, and did not find the work of hours a strain on them. They moved about from mill to mill on the chance of receiving more pay and do get their deposit money refunded so as to have ready cash, and not because their health broke down. There was a lot of drunkenness on pay day and holidays, during the toddy season, and quite one-third of the hands drank. Absenteeism was partly attributable to drink, though not to any very great extent. A few of the hands had to walk three miles to work, but the majority lived in *para cherries* within a mile radius of the mill. He thought there were a few more half-timers and young adults employed now than ten years ago, but the supply had always been plentiful except when the crops were good, in which case some of the men went away. There had not been a single fatal accident in the mill caused by textile machinery, and only a very few minor accidents. Sometimes an operative caught his little finger in the pinion or draft wheel under the guard, and occasionally a man met with an accident while putting the belting in position. The rollers of the ring frames rolled in the same direction and were not dangerous. Years ago they employed Bombay men to teach the hands, but now the Madras men had been trained, and the services of Bombay men were dispensed with. The Madras operatives had improved in skill and worked better without injuring the machines. He estimated that in the last ten years, without any increase in the number of hands, their production had increased by 20 *per cent.* In this time the machinery had also improved, but they had used the same class of cotton all the time. There was not much sickness in the hot weather, and their highest temperature was 107 or 108 degrees. On the longest day they started at 6 A.M. and worked until 6 P.M. They never worked beyond twelve hours a day and they had no electric light. The custom of giving *dasturi* to obtain employment was not prevalent in the Madras mills now; it had been stopped. He could not say what the "admission fee" was when *dasturi* was paid. He had only heard rumours about the prevalence of the custom. He was convinced that the hands preferred a fixed starting and finishing hour to the changing daylight day. The men had often complained of the long hours in the other mills. Although in the course of ten years they had not reduced the number of hands *per* frame, yet they had increased the number of spindles, and added to the productive power of the mill with the same number of hands.

NOTE.—The witness was not asked to submit written evidence.

SHOLAPUR.

WITNESS No. 230.

Mr. G. E. Sutcliffe, manager of the Sholapur Spinning and Weaving Company, Sholapur.

Mr. G. E. Sutcliffe. *Oral evidence.*

WITNESS stated that there were 2,296 hands on the muster roll, namely, 1,453 males, 661 females and 182 half-timers. The working hours were from daylight to 7-30 P.M., with an interval from 12 to 12-30 P.M. Eight years ago the mill worked up to 9 P.M. for a few months, but these long hours were stopped, because it was felt that they did not result in a gain to the mill. He disapproved of legislative interference with the hours of adult labour, both on account of trade competition, and also because under the present system the hands did not actually work more than 10 hours. The competition of Japan was going to be more serious in the future than it had been in the past. The mills there worked day and night by two shifts, and thereby reduced their fixed charges by one-half. The Indian mills worked by the so-called simultaneous "shifts," and employed double the number of hands required. From experiments he had made over a period of 18 months he had found that the hands worked slightly less than 9 hours in a day of 12 hours and 20 minutes. This meant that they worked 5·1 days a week. In addition to Sunday, they also absented themselves on four days in the month. If the hours were reduced to 12 a day, mills could dispense with a certain number of hands, but the production would decrease in the same ratio as the new hours have to the old hours. If the mill improved its organisation and supervision, then the production *per* hour would increase equally in the longer and the shorter days. He saw no reason for the proposed "young persons" class, as he had seen nothing that induced him to think that they were hardworked. He did not approve of young persons commencing work at 5 A.M., and instances of that kind should be stopped. Provided that the half-timers only worked their proper time, there was not much hardship in their coming to work at dawn with their parents. When there was a scarcity of child labour, there might perhaps be a little abuse of the law regarding the employment of children, but it did not occur to any great extent. The Indian people were very kind to their children and were careful to see that they were not abused. Indian parents were not more anxious than parents generally to have their children earning as high wages as possible. The half-timers earned Rs. 2-4-0, the full-time boys Rs. 4-8-0, the ordinary spinners from Rs. 10 to Rs. 12, and mule spinners and weavers from Rs. 13 to Rs. 14. As a rule there was one man to a loom, but if a man tended two looms, then he could earn up to Rs. 25. If the young persons worked the whole of the 13 hours, then the day would be too long for them, but they did not in fact do so. If the "young persons" were limited to 12 hours' work, it might be possible, though difficult, to run the mill beyond those hours. He would have to insist on all adults being present for the last hour, and these men would in consequence have to be allowed to take more leave during the day. The "young persons" class would create a difficulty which could be got over by a little contrivance. It amounted to this, that the "young persons" would have to work harder during the day in order to conserve the energies of the adults for the last hour. The young persons would have shorter hours but more intense labour; and they probably would not appreciate the change. Day and night running was cheaper than day running, to the extent of about 2 annas a lb. in the cost of the yarn. These figures were based upon an actual experiment made at home in a fine spinning mill. When the mill ran by day the yarn cost 7 annas a pound, and when it ran day and night the cost was reduced to 5 annas. They obtained double production, and 2 annas a pound profit, in the one case; and in the other half production and no profit. In an ordinary Indian mill the saving would be from 3 pies to 6 pies *per* pound. Rather than work for 15 hours he thought it would be more profitable for the Bombay mills to work 24 hours by two shifts, and meet Japan with her own weapons. Machinery did not deteriorate any more in 24 hours running than it did in 12, and in the matter of belting and bands the loss was actually greater in the 12 hours. Fixed charges were very much heavier in India than in the West, and this could only be met by running longer hours. The operatives would prefer a leisurely 13-hour day to a more intense 12-hour day. With increased supervision a fixed 12-hour day would not mean a decrease in production. It was impossible, however, to get 10 hours' continuous work out of the hands. He considered that they should not be asked to do more than 13 hours' attendance in one day; otherwise the men would be at the mill for the whole of the daylight hours. From the humanitarian point of view, it would be advantageous if the hands were allowed some part of the daylight hours at home. The health of the operatives was good; the labour was recruited from the district. The hands generally went to their homes for one month in the year. There was an increase in the monthly rate of wages when the electric light was introduced. The test that witness made of the 8-hour shift system extended for nearly 12 months, and was made at the Coorla mill in 1900. They tried to work the hands an 8-hour shift there, giving them a full day's pay; but as there was no electric light, the shifts could only be of 6 hours each. The hands were offered three-fourths of the day's wages for 6 hours work, but they refused that offer, and would not work the 6-hour shifts. The short shift system could only come by a process of evolution; there was no permanent difficulty preventing its adoption.

Note.—The witness was not asked to submit written evidence.

WITNESS No. 231.

Mr. Nowroji Nusserwanji, manager of the Narsinggirji Manufacturing Company, Limited, Sholapur.

Mr. Nowroji Nusserwanji. *Oral evidence.*

Witness stated that the mill employed 1,212 men, 576 females and 302 half-timers. Their working hours at present were from daylight to 7-30 P.M., but there had been occasions when they had worked longer hours. Their longest day was from 6 A.M. to 9 P.M., but on that occasion the preparation department only worked the extra hours, as they very were short of cards at the time. These hours did not apply to the spinning department. Up till ten months ago they worked until 8 P.M., but the operatives requested them to stop at 7-30 P.M., as the other Sholapur mills did, and the agents consented. Since then the operatives had not asked for a further reduction

Mr. Nowroji Nusserwanji.

of hours. The children worked in two sets—one set from the starting of the mill until 8-30 A.M. and from 9 to 12 A.M., and the second set from 12-30 to 3-30 P.M., and from 4 to 7-30 P.M. All the children did not actually stop work at one time, and so it could not be said that the two half-hour stoppages were stoppages complying with the requirements of the Act. Child labour was plentiful, and in his opinion the half-timers did not work in two separate mills in the course of any one day. Witness was of opinion that they got more production with the electric light working. Not only was the day lengthened, but the men did not idle away so much time in the compound after dark as they did during the daylight hours. He was not, therefore, in favour of a fixed legislative day, which would mean a decrease in production. Without such a restriction there was no danger of resorting to very long hours, because the men themselves would not consent to work up till 9 P.M. The operatives did not wish to work beyond 7-30 P.M. and would strike if the agents desired to lengthen the present hours. Among the half-timers there were 67 girls employed in doffing work. The operatives consisted chiefly of *mahrattas* and *mahars*. Out of the 1,212 men he was of opinion that about 410 would be between the ages of 14 and 17 years. The creation of a "young persons" class with fixed hours would determine the working hours of the mill. He could not replace these "young persons" by adults, and the mill would have to stop running when the legal working day of the young persons finished. In his opinion, even if the length of the working day were reduced, they could not make the operatives more attentive to their work. He found this to be the case during four months in 1898, when on account of the scarcity of cotton, shorter hours were necessary, and the mill ran from daylight until 6-30 P.M. His experience then was that the men who were paid by the piece did not earn the same amount of wages as in the longer day. All the half-timers in the mill were examined, and were never employed before they obtained their certificate of age. The children were sent about once a week to the hospital, and the few days' delay did not inconvenience the mill. The half-timers earned Rs. 3 a month, but they had to work harder for the additional few annas on wages (the usual rate in other mills is Rs. 2-4-0) owing to the increased length of the ring frames. The half-timers were never worked beyond their legal hours.

Note.—The witness was not asked to submit written evidence.

Witness No. 232.

Mr. Hormusji M. Cola, carding master of the Lakshmi Cotton Manufacturing Company, Sholapur.

Mr. Hormusji Cola.
Oral evidence.

Witness stated that 1,594 men, 692 women and 151 children were employed in the mill. Witness had been three and a half years in that mill, and had also had experience in the Dunbar Mill, Calcutta, and the Colaba Mill, Bombay. At present they worked from 6 A.M., to 7-30 P.M. with half an hour's interval, and electric light was utilised both at the beginning and conclusion of the working day. The hands took their big meal between 9 and 11 A.M. and rested during the midday interval. Occasionally they took a small meal towards 3 o'clock. The children worked in two distinct sets, which changed at noon, and alternated every month. He was convinced that the half-timers in Sholapur did not work in two mills on the one day; and as there was no scarcity of child labour, there was no necessity to guard against this abuse. He considered that the Bombay operatives were superior workmen to the Sholapur men, and the latter in turn were better than the Bengalis. The Bombay operatives paid most attention to their work. The supply of adult male labour in Sholapur was not so plentiful that they could afford to be stricter with the operatives. In November and December 1907 twenty-two counts were taken of the number of operatives actually inside the mill, at work, in order to ascertain how many hours they actually worked, and the following results were obtained:—In the spinning room each man worked an average day of 9½ to 9⅝ hours; in the roving and card room 9¾ hours; in the weaving room 10 hours; in the blow room 10⅛ hours; and in the reeling room 8¼ hours. They used Barsi cotton, which was superior to that used in Bombay, and in consequence they had a bigger spindle production per hour than a Bombay mill. They employed 10 *per cent.* more hands than were really necessary for the proper running of the mill. Witness mentioned that while he was at the Dunbar Mill they unsuccessfully tried a fifteen-hour day, worked by three shifts of twelve hours each. In the course of the twelve hours each man was also allowed off for one and a half hours. The experiment was not satisfactory. The Colaba Mill worked daylight hours only. There was no necessity for a fixed working day, as the men themselves objected to work beyond thirteen hours. There had further been no deterioration in their health. The hands were never called up on Sundays for cleaning purposes; cleaning was done fortnightly during work hours. They had a school on the premises, which the children attended. The afternoon set went from 10 to 12 A.M., and the morning set from 12-30 to 3 P.M.; and the attendance was *from 80 to 90 children.* There had been strikes on account of wages. There would be, on one ring frame, two piecers, one assistant, and one doffing boy. The piecers earned Rs. 7-8-0 and Re. 1 bonus; the assistant Rs. 5-8-0; the full-time doffer Rs. 4-10-0; and the half-timers Rs. 2-6-0. In order to get the hands in the spinning department to attend regularly they gave four annas bonus for a full week's attendance. In one week in December this was earned by doffers in frame department 40 out of 94; side boys 286 out of 366; ring doffers 62 out of 111; *tar-wallas* 97 out of 105; and half-timers 127 out of 216. There was no *dasturi* paid in Sholapur. There was not much drinking among the operatives. There had been very few accidents, a few operatives had got their fingers crushed in the ring frames through negligence. The certificates of age in Sholapur were issued in triplicate, one remained with the doctor, one in the mill office, and one was kept by the child, who paid the four annas fee. There was no practical objection to the child wearing the certificate, enclosed in a little tin case, around the neck. If desired, the certificate would be kept in the office, and the child could wear a small disc on which the number of his certificate would be stamped.

Note.—The witness was not asked to submit written evidence.

AMRAOTI.

Witness No. 233.

Major R. P. Horsburgh, Deputy Commissioner, Amraoti.

Major R. P. Horsburgh. *Written evidence.*

I have no reason for saying that the working hours of adults should be limited, except that it seems reasonable to fix some time limit. I do not think the physique of workers has been affected by long hours. I consider a 12 hours working day, with an interval for food and rest, would meet with general approval amongst the operatives, and the most convenient hours would appear to be from 5-30 A. M. to 6 P. M. I have not noticed, nor have I ever heard mention made of, deterioration amongst persons between the ages of 12 and 14 who had been employed as adults. I do not think women should be prohibited from working at night. They are only employed in ginning factories where the work is very light. I see no reason for raising the age at which children are allowed to work in factories beyond 9. Indian children at that age are very useful, and the sooner they learn to earn their livelihood the better. I have no reason for thinking that certificates of age and physical fitness should be required before children are allowed to work. I do not consider it desirable or necessary that factory owners be obliged to provide any sort of education for children in their factories. I consider it unnecessary in Berar gin or pressing factories to test the purity of the air with a view to fixing a standard of purity. A continuous and forced draft of air through pressing factories would be an improvement in expelling cotton dust. In ginning factories the number and height of windows or ventilators should be greatly increased, in most factories at least. If the air in factories is to be humidified I consider that only the purest water should be employed for the purpose. It should certainly be prescribed that all doors and windows of working rooms shall be hung so as to open outwards. Further, in most ginning factories there are far too few doors. I am not aware of any necessity for increasing precautions for fencing machinery, if the existing law and rules framed thereunder are rigidly enforced. I do not think a full time inspector is needed to assist the numerous *ex-officio* inspectors in securing the observance of the Act.

Oral evidence.

Witness was of opinion that the Factory Act had always been strictly enforced in Berar though recently the inspection of factories might have been a little relaxed. Some years ago he drew up a series of questions, which he let owners have on application and these questions were adopted by the local Government and for the last 12 years or so have been utilised by all factory inspectors. But since the amalgamation of Berar with the Central Provinces the Central Provinces form has been in use, which contains no list of questions to be put at the time of factory inspection, and hence such inspection notes as "all correct" are now in vogue. Since then, however, a new form of questions had been issued. The gins in Berar only worked for a few months in the year, but they should all come under the Act. The revised Act should apply absolutely to all factories. He was not in favour of prohibiting women from working at night in gins, as it was easy work and no harder that *punkha* pulling. If women were prevented from working at night, then it would interfere with the industry, as men would not be available to do night work. It was the custom in Berar for women to pull *punkhas* at nights, and they had to arrange about their children just as the workers in gins had. Labour was chiefly recruited from the *mahars*, who were leaving the villages for factory life. Witness had noticed that the demand for factory labour was seriously affecting the agricultural labour supply. When not employed in the gins, the women would do weeding, and earn about the same wages. He was not aware of any abuses of the Act in Amraoti. The accidents were few and trifling, and there was no deterioration of health. Factory owners would not encourage women to work on two gins during the one day, and witness did not know of such a case occurring. Under present conditions the atmosphere in gins and presses was some times not so good as it might be. If the ventilation were improved, then he considered that ginning was lighter and easier work than agriculture. He had no special reasons to urge on behalf of the restricted day, but considered that it was only reasonable to introduce some enactment whereby adult labourers could not work beyond twelve hours a day. He was not opposed to the second examination for physical fitness at 14 years, though he saw no reason for it. Such an examination would not affect the industry, and would not interfere with the labour supply. Witness thought that the duties of the boiler inspector and factory inspector should be apart, as the former had no power to enforce the law. The boiler inspector had to report to the magistrate, and this involved a great deal of correspondence, whereas the factory inspection work would be very well left to the magistrates, or to a proper factory inspector. The number of gins and the area of ground under cotton were increasing. Ginning was an extremely profitable occupation, and the tendency was to gamble in cotton. Every large town had its pool; the system originated in a desire to evade the law. This, however, had been frustrated. The success of the pooling system was not, in his opinion, an explanation of the multiplication of gins. Ginning had to be finished before the rains, and if the new Act prohibited women from night work then the only alternative lay in greatly increasing the number of gins.

Witness No. 234.

Lieutenant-Colonel Buchanan, I.M.S., Civil Surgeon, Amraoti.

Lieutenant-Colonel Buchanan, I.M.S. *Written evidence.*

There are 56 gins and 30 presses for cotton, two presses for oil, one match factory, and one spinning mill, in this district. The gins and cotton presses work from November till about May, but in a bad cotton season like the present many of them work for a much shorter time. The cotton presses rarely if ever work at night, but in the busy season many of the gins are kept going by night as well as by day. In all the gins a few spare hands are employed so that any employee is able to take an hour or half an hour off for food or rest as they desire. To every four or five gins there is usually one extra hand. Thus if a gin is working for 12 hours in a day each employee would actually only work for $\frac{4}{5}$ths of this time. With regard to the question whether all gins and presses should be brought under the Factory Act irrespective of the number of months they work in a year, I think it is advisable that the same rules should be made applicable

Lieutenant-Colonel Buchanan.

to all gins and presses, as otherwise the gin that is not under the Act may be worked at an unfair advantage as compared with one in which the rules of the Act are enforced. I may illustrate this point by a reference to some trouble that was experienced in Nagpur in connexion with the Swadeshi Mills. The rules regarding the ages of children were carefully attended to in the Empress Mills but children who were not allowed to work full time in the Empress Mills were induced to leave these mills and were employed by the Swadeshi Mills. The manager of the Swadeshi Mills, was not aware of what was being done by his subordinates, but the manager of the Empress Mills was put to a considerable inconvenience owing to the children who had been trained in his mill being taken away and employed in the other mill. The manager brought several such instances to my notice and I fully agreed with him that it was very unfair that the manager who had carefully attended to the rules should be put to inconvenience owing to the neglect of these rules by another company. The case was brought to the notice of the Deputy Commissioner of Nagpur and (if I remember rightly) a fine was inflicted on the manager of the Swadeshi Mills. I think, therefore, that it is very desirable that a manager who carefully follows the rules should not be put at a disadvantage as compared with a manager who may be able to evade the rules. With regard to the suggestion that the employment of women on night work should be prohibited, I cannot imagine that anyone who has much acquaintance with the conditions under which the gins are worked could have made such a suggestion. Many of the gins in the district work at night, but a separate lot of employees are brought in for the night work. I have spoken to many of the managers on this point and all are agreed that it would be a very serious blow to their business if such a rule were introduced. It is absolutely necessary, owing to the nature of the work, that the gins should sometimes work at night: the night work can be carried on without inflicting any injury on the employees, and a rule like the rule suggested here would be a serious blow not only to the employers but also to the employed. Cotton must be got rid of during the season, and the only way to get all disposed of before the rains set in is to keep the gins going at night. Regarding the question whether any special provision modifying the general law would be necessary if it is decided to make the Factory Act applicable to all gins and presses, I have asked many managers and most of them are satisfied with the present rules. The fencing of flywheels, shafts, etc., varies very considerably in the different gins. In some it is very good: in others it is somewhat defective, but owners are usually quite willing to adopt whatever suggestions are made by inspecting officers in regard to the fencing of machinery. I have been recommending managers to gradually introduce the system of fencing which is to be seen in the gin of Mr Ramji Kanao in Amraoti, but it would not be desirable to ask managers to alter their present arrangements hurriedly. If their attention is drawn to a good model they will I feel sure gradually introduce that form of protection In the spinning mills I think there should be a limit to the working hours The manager of the Badnera Mills has informed me that he thinks 12 hours would be a reasonable limit, and I agree with him as regards the spinning mills But in the gins I do not consider that there are sufficient grounds for restricting the number of hours. The manager of the Amraoti Cotton Manufacturing Company thinks that "there is no justice, fairness or reason in" the proposal to reduce the number of hours work. It would probably be difficult or impossible to prove that the employment of children between 12 and 14 as "full-timers" has been injurious to their health, but the introduction of a "young persons" class would give rise to difficulties, and make the practical working of the rules too complicated. The minimum age for children should not be raised above 9, I think, as under the present rules difficulties are experienced in obtaining enough children. If the physical fitness test is introduced it may act in two ways: it may prevent the employment of a child who is unfit, but the unfitness may often be the result of insufficient food, and employment may bring the extra money that will provide sufficient food to make the child "fit" Managers would probably not employ children that are evidently unfit. In the Empress Mills, Nagpur, the custom has been to have fresh certificates of age before a child is allowed to come on the full time list. In Badnera the manager calculates the age from the first certificate If children are not employed in regular sets I do not see how it would be possible to enforce the rules regarding hours of employment. The proposal to make it compulsory for owners to provide elementary education at their own expense for children working in their factories is described by the manager of the Badnera Mill as "the most unjust demand that he has come across" Managers might be encouraged to assist in providing means for education, but it would not be advisable to compel them by law to do so. Children often bring the parents food to the factory compound In some factories a place is set apart for such children so that they may not come near any machinery. It would probably be sufficient for the present to make a prohibition regarding children going to dangerous parts of the factory, but it would not be advisable to ask managers to have a fence put up to indicate the limit beyond which children are not to be allowed to go. In some gins I find children employed to pick up cotton that has been blown about by the wind: such children are generally made to run away and conceal themselves when an inspecting officer comes. There is probably no objection to children being employed in this way, but the *mukaddams* are under the impression that it is contrary to the Act. I am not certain what action should be taken in regard to such cases. Sometimes the owners of the cotton—not the owners of the factory—employ children for this purpose A starving child may earn a few annas at this quite healthy employment, and may receive benefit from the employment The enforcement of strict rules in such a case may mean starvation for such a child. One to 25 is a fair amount for latrine accommodation, and in the larger factories in towns separate urinal accommodation might be insisted on, but it is quite unnecessary in the villages or gins and presses that are situated some distance from the towns. Doors should be made to open outwards. I have seen some doors that have recently been put at the back of the ginning platforms so hung that they only open inwards and as there is usually a quantity of cotton lying against them it would be impossible to open them hurriedly.

With regard to the question of uniformity of rules, uniformity might be considered under two heads, general and local. The conditions in a jute factory in Bengal may be quite different from those in a spinning mill, or in a ginning factory, and therefore it may not be advisable to aim at

general uniformity : but it would not be advisable to allow a gin with 49 employees to work under different rules from the gin with 51 employees. There should be uniformity for each class of factory, but it is hardly necessary to insist on latrine accommodation for a gin that is situated in a field far away from a village or town. The question of full time medical inspectors is a complicated one. In Bombay or Cawnpore where numerous factories are situated close together a full time medical inspector may be desirable. In a district like Amraoti the Civil Surgeon can look in at a factory when touring in the district, but it would be impossible to have inspections carried out by whole time men unless their number is very large. Their arrival in a district would be published widely, and all things would be in order at the time of their arrival. It is true that the same objection would apply to the Civil Surgeon, but to a much less degree. If it is intended to have a sort of double inspection partly by the Civil Surgeon and partly by the special inspector the difficulties would be greater because responsibility would be divided, and there would be the old story of "no man being able to serve two masters". What the one would recommend, the other might probably condemn. Managers would be confused, and there would be the usual friction which results when two men are set to do the same work. The appointment of special medical inspectors in the districts, such as Amraoti, would be a step in the wrong direction. I have no statistical basis, but in the spinning mills the general condition of the operatives strikes one as being inferior to that of the average of the working classes. I have not noticed that the operatives in spinning mills, ginning factories or presses suffer more than the general population from specific diseases. The method of determining the age which I follow is "a tooth every year from 6 to 12", beginning with the first molar at 6 years of age and then

Lieutenant-Colonel Buchanan.

C. I.	L. I.	Can.	A. B.	P. B.	S. M.
7	8	11	9	10	12

that is, the incisors and bicuspids take you from 7 to 10, and for 11 and 12 you have the canines and 2nd molar. For ages between 12 and 15 one depends largely on the appearance of the genitals in males, and on the development of the breasts and history of menstruation in females. From 16 to 18 hair on the face and general development act as guides, and about 18 the last molar may appear.

Oral evidence.

Witness stated that he had had from three to four years' experience of factory inspection work in Amraoti, Nagpur and Nimar. Although he had no definite statistics to go on, he considered that mill operatives were not so strong in physique, or of such good health, as persons in outside employments. This was partly attributable to the strain of factory work. He found that if he remained inside even a well ventilated mill in the hot weather for two hours he became exhausted, and he had been told that at the end of the day's work at the Swadeshi Mills, Nagpur, operatives had been known to fall down from exhaustion. He approved of the restricted day for spinning and weaving mills, but would exempt gins and presses, where the work was seasonal, and corresponded closely to harvest work at home. If ginning work were continuous it would be as injurious as mill work; but the gins only worked in the cold weather, and the modern buildings were all well ventilated. He did not agree that ginning work was more dangerous than mill work. There was much dust in the gins, and one would expect to find lung diseases; but apparently the workers were not troubled by lung diseases. Comparatively few operatives came for medical examination, and so witness could not say that he had examined a large number of operatives, and found lung disease absent or present. All gins should be brought under the Act, and the dust nuisance should be remedied as far as possible. Witness considered the present system of factory inspection quite good, and saw no reason to hand over the duties now performed by the Civil Surgeon to the special inspector. He agreed that there was the possibility of trouble arising from inspectors requiring different things to be done, and it would be better if uniformity could be secured. Continuity of policy could be obtained by laying down general rules on certain points. Witness considered that the dentition test given in his written evidence was a reasonable test. Dentition was the best age test. Later on it would be possible to work from the registration records, which were fairly accurate in the Amraoti District.

Witness No. 235.

Mr. Eliopulo, of Messrs. Ralli Brothers Agency, Amraoti.

Written evidence.

Messrs. Ralli Brothers have pressing and ginning factories at Amraoti. We employ approximately 60 men and 10 women in the pressing factory, and 82 women and 39 men in the ginning factory. These numbers vary somewhat. No children are employed in either factory. Gin and press factories usually start work about the 1st of November, and finish in April, May or June, according to the length of the cotton season. The usual hours a ginning mill works are from 6 A.M. to 6 P.M., except in the case of night work, when they work for 24 hours with the usual stoppages of half an hour at midday and half an hour at midnight, and for 24 hours once a week. In a press factory the hours are usually from 6 A.M. to 6 P.M., but occasionally a few hours longer are, worked according to requirement. The average number of hours a person is employed in a ginning mill is 12, during which time they have half an hour's stoppage at midday. There are however, 25 per cent. more women employed than are actually required to work the factory; and it is their duty to relieve the other women as required, so that probably each woman will have intervals of rest amounting in the aggregate to at least 2½ hours. There are, however, no stated intervals at which the women are relieved. When a woman requires a relief for food, rest or other purposes, she informs the *mukaddami*, who provides a relief. The usual average number of hours a person is employed in a press factory is 12, but this varies considerably according to the requirements of the season. The press may be required to work 5 or 6 hours a day, or it may be necessary to work 18 hours, although the latter time is extremely rare, and usually does not occur more than 4 or 5 times in a season. The press *hamals* and others employed

Mr. Eliopulo.

Mr. Eliopulo.

in the press house have no fixed intervals allowed for rest, nor is the press stopped for half an hour at midday. There are, however, a sufficient number of extra hands employed to ensure reliefs being given at any time that may be required for food or rest. The duty of seeing that reliefs are given as required devolves on the press overseer, and we have never heard a complaint from any of the *hamals* regarding insufficient time being allowed for food or rest. We certainly approve of the proposal to bring under the Factory Act all ginning mills and pressing factories, irrespective of the number of months they work in a year, or the number of hands employed, for the following reasons, *viz.*:— (1) *Unfair competition.*—The owner of a ginning mill or press factory which comes under the Factory Act has to employ a certificated engineer at a salary of anything between Rs. 100 and Rs. 250 a month. He also, in the event of his wishing to work his factory for longer than 12 hours a day, must in addition employ a night engineer at a salary of anything between Rs. 70 and Rs. 100 a month. Again he must only work his employees for stated hours as allowed by the Act; he must not employ children, he must have very ample latrine accommodation, his factory must be periodically painted and whitewashed according to the Act, and he must fit up more or less elaborate guards to pulleys and fencing for shafting according to the ideas of the local factory inspector. On the other hand, a factory owner whose factory does not come under the Act need only employ a fitter to look after his boiler and prime mover, at a monthly salary of anything between Rs 30 and Rs. 50. He can work day and night without engaging a night engineer or even a night fitter; he can work his employees as many hours as he thinks fit, or as many hours as they will work, and he has no expenses with regard to cleanliness or safeguarding the lives and limbs of his employees, consequently for capital expended the small factory owner whose factory does not come under the Act has larger profits than the large factory owner whose factory does. (2) *Danger to employees*—The danger to the lives and limbs of employees from defective boilers and prime movers or unfenced and unguarded machinery while it is running is just as great, individually, in a small factory working only for a few weeks in the year—and which does not at present come under the Factory Act—as in a large one which does. We do not approve of the suggestion that the employment of women on night work should be prohibited, provided they are employed under proper supervision, that is to say, care should be taken that no women are employed in a ginning mill or pressing factory for night work who have been employed in other ginning mills or pressing factories during the day. This might be more or less effectively brought about by the employment of a gin *muhaddam* to provide the women giving him distinctly to understand that he is liable to a severe penalty if he provides women for night work who have been employed elsewhere during the day. For the short time that women can be employed on night work during a cotton season seldom, if ever exceeding 3 months, we consider that it would not injure them either mentally or physically, provided of course they are in good health to begin with. Further as being employed on night work is optional with the women themselves, we consider it would be a distinct hardship to prohibit them from being so employed, as owing to the difficulty of finding employment during the slack season they are glad of the opportunity of earning a few extra rupees during the cotton season. Therefore to employ men on night work instead of women would lessen, the total number of women employed in ginning mills, and consequently their earnings would be less, and possibly their poverty still greater than it is at present. Also there are many women who would be glad to earn a few rupees by working night work, who owing to children and domestic matters, find themselves unable to work in ginning factories during the day. We do not know of any modifications necessary to be made in the present Factory Act, should it be made applicable to all ginning mills and presses. We suggest, however, that the Act should be revised especially with regard to the number of hours of working and system of shifts to be employed, both for men and women and also for engineers, and that it should be couched in clear and unmistakable language so that he who runs may read, and that it should not be left to the option of local factory inspectors to interpret the Act according to their individual fancies. We agree with the view that the line shafting should be adequately fenced. There are no objections whatever to the shafting being cased in between the drums or pulleys, and it certainly reduces the liability to accident. We may add that our ginning mill at Amraoti has its line shafting so cased in, and we have found from actual experience that there are no objections to it, and that it certainly decreases considerably the liability to accident We see no reason why women any more than men should be prohibited from working in front of an opener, as in the case of a stone being hurled from it, it would, we take it, be as injurious to the men as to the women, provided they came in contact with it, and in case of fire they would stand an equal chance with the men of escaping. With regard to the prevention of accidents from stones being hurled from the openers, as these stones are almost invariably thrown out at a tangent to the path of the opener teeth, a curved guard in front would certainly reduce the number of accidents if it did not entirely prevent them. The objection to it is that it causes the cotton to be thrown nearer the mouth of the opener than it would otherwise be, but as a certain number of men or women have under present conditions to be employed clearing the cotton away from the mouth of the opener, and as the same number could just as effectually clear it away with the guard fixed in position, this objection need not, we think, be considered insuperable. Of course, the cotton could be carefully picked over and freed from stones before being put through the opener, but this seems to us to be a laborious and probably ineffective method. With regard to the prevention of fires, provided the opener is properly lagged inside with wood, and the teeth are made of wood so that there is no chance of stones coming in contact with iron or steel and causing a spark, there is very little chance of a fire taking place. Of course there is always the danger of matches being left amongst the cotton, but, so far as we can see, it is impossible to eliminate that. No accident has occurred in our factories through machinery or belting during the last five years.

Oral evidence.

Witness stated that he had had fourteen years' experience of the ginning industry, in Kathiawar and Berar. Messrs. Ralli Brothers' gins never worked the long intermediate stage of 16 hours or so with one shift; their day was either 12 or 24 hours. He had no objection to a fixed twelve-hour day. The women who feed the gins were relieved under a proper system of shifts. After three hours of work a woman had half-an-hour off, and during that interval her place was taken by an adult female. Children were never allowed at the gins.

He approved of all gins being brought under the Act. Occasionally the press worked for 18 hours, but the labour for that was supplied by contract. He was not aware of the precise arrangements made with the press men. In any event the work was not continuous, and extra hands were employed. He had never tried to get men to do night work in gins, and if women were prohibited from night work it would make labour scarce, and increase the wages bill. Only *kapas* openers were used in Hubli because the cotton was of long staple and would be spoiled if put through a cotton opener. In Amraoti the fibre was short, and so the cotton could be cleaned in the opener without injury, There were no cotton openers in Kathiawar. Witness was not in Amraoti two years ago when an accident took place at Khunilals' opener. Accidents arising from fires at the opener could not be prevented, though it would be wise to insist on the provision of efficient fire-extinguishing appliances. They had sprinklers in their factory, and the insurance company gave them a discount on that account. There was no object in women working in front of the opener, and re-shaking the cotton. He had never seen them doing that. An order prohibiting women from working in front of the opener would not affect the industry. For some three years now labour had been getting scarcer, owing to the influx of labour from the north having stopped. There had been a considerable rise in wages during recent years. The rates for men had increased from 4 annas to 6 and 8 annas; women used to be paid 2 annas a day, while in 1893 women were only paid 1½ annas. In Akola four years ago men earned Re. 1 a day. Witness asked that the wording of the new Act should be clear and explicit, and that there should be reasonable continuity in the system of inspection. He approved of the appointment of one whole-time special inspector. Mr. Eliopulo.

Witness No. 236.

Mr. Schiller, of Volkart's United Press company, Limited,

The name of our factory is Volkart's United Prsss Company, Limited, Amraoti. About 65 men, 10 women, and 2 boys are usually employed in the press. The press usually starts working about the 10th November, and closes at the end of April or thereabouts. It is usually worked from 7 A. M. to 6 P. M. A person employed in our factory generally works 11 hours a a day, with two intervals of ½ hour each for his or her meals. We think *all* press factories ought to be under the Factory Act, irrespective of the number of months they work in a year. We do not see why a factory working for a shorter period than others should for that reason be exempted from the rules and regulations of the Act. We never employ women on night work. If it is decided to make the Factory Act applicable to all presses, we do not think it will be necessary to make any special provisions modifying the general law in the case of presses. We have no suggestions to make as regards this matter. The question regarding the casing of the line-shaft does not apply to our factory. We consider it of no importance whether women are allowed or prohibited from working in front of the opener, as this place seems to us not to be more dangerous than any other place inside the press house. We think it impossible to prevent stones being hurled out from the opener, but by prohibiting iron grantings and other iron accessories being used inside an opener many a fire originating there could, we think, be prevented. There have been no accidents in our factory during the last five years. Mr. Schiller. *Written evidence.*

Witness stated that his company had no gins in Amraoti. The employment of women at night in gins was unavoidable, and the industry would be greatly hampered if they were prohibited from so working. Even if they offered men higher wages, a sufficient supply of labour would not be available for night work. In the course of ten years the local cotton crop had doubled, and Amraoti had changed from a cotton market to a *kapas* market. The cotton now came in unginned, and the arrivals of *kapas* were increasing every year. All the ginning had to be concluded before the rains. There was not sufficient accommodation to store the cotton in Amraoti, and Bombay was not in a position to help them. There was no moral objection to employing women at night. They gave the Sunday holiday, and he approved of this being general. In Amraoti the majority of the hands wanted half the Sunday off in order to attend the market. No cleaning work was done on Sundays. Quite recently two women had been burnt to death while working in front of the opener at Volkart's Press, Nagpur. If the cotton came out straight from the opener then the danger was greater than when the cotton was carried upwards on a traveller. There was no necessity to employ women in front of the opener, and such employment should be prohibited. He obtained his labour by contract. The press stopped for one hour every day. *Oral evidence.*

Witness No. 237.

Mr. B. V. Dravid, Yeotmal.

I am the principal partner and managing proprietor of four ginning mills and four cotton presses in Yeotmal and Yeotmal district. Mr. B. V. Dravid. *Written evidence.*

A—1. B. V. Dravid and Company's old gin factory of Yeotmal—55 men and 70 women.

2. „ „ new „ 50 men and 55 women.

3. „ „ cotton press factory of Yetomal—45 men and 10 women.

4. Balkishandass and Dravid's press factory of Yeotmal—45 men and 10 women.

5. B. V. Dravid and Company's gin factory at Bori, taluka Darwha,—50 men and 55 women.

6. B. V. Dravid and Company's cotton press—45 men and 10 women.

7. B. V. Dravid and Patki's gin factory at Kelapur, district Yeotmal—55 men and 70 women.

8. B. V. Dravid and Patki's cotton press—45 men and 10 women.

Mr. B. V. Dravid.

No children are employed in any of the above factories. These numbers are of labourers working in each of the ginning and press buildings, and not working in the compound. The work begins from the 1st of November and continues till the end of April. The ginning factories are usually worked both night and day during the months of December and January. In the remaining period they are worked only in the day time and that too two or three times a week. Towards the close of the cotton season, they are worked only once a week, or even once in a fortnight. Cotton presses are worked only during the daytime and that from 5 A. M. to 8 P.M., according to requirements. They are worked daily for one or two months and then only once or twice a week and towards the end of the season once a fortnight The average number of hours a person (male) works during 24 hours is 13. He has half an hour's rest at noon ; but a few relievers being kept in each factory, the actual working hours for each person (male) come to about 12½. I do not approve of the proposal to bring under the Factory Act the ginning mills and presses irrespective of the number of months they work in a year. The Factory Act restricts the number of hours of work and thereby has a wholesome effect on the factories working for four months in a year. But the factories working only for a month or less time will, under the Factory Act, have to restrict hours of work and hence they will not get local labour nor can they import labour. The labourers too will not be gainers under the provisions of the Act. They being employed only for a short time are willing to work hard and earn their wages according to the length of time they work. But under the Act they will earn less, though willing and able to earn more. They reside in villages and have to depend upon their earnings in the season which they lay by. Thus they will be put to loss and will be compelled to go far from their houses to seek employment in cities and towns where they will have to spend more though they get more. Thus the Act will be a hardship both to factory-owners and to the villagers that work in the factories. Even from the humanitarian point of view I do not think it necessary to put a check on the hours of work when the work lasts only for a short time and then too is not continuous. I am against the suggestion that the employment of women on night work should be prohibited.

(1) Because the factory-owners will be put to loss as they will have to engage men to work at night in place of women. They will consequently have to pay more for work which when done by women can be done for a smaller cost. There is no advantage of any sort in employing men where on account of the lighter nature of the work, women can as well do and thus earn wages.

(2) Moreover the factory-owners will find it very difficult to get men to supply the place of women. Women too will suffer by this system, They will have no work in the daytime as there is already a sufficient number of women employed for day work, and if none are to be engaged for night work, it will be so much loss of wages to the other women.

(3) The factory-owners and traders will again have to undergo loss in consequence of delay in outturn and delivery of cotton, and this delay is inevitable when men are employed in place of women for night work.

(4) The labourers too will not agree to this, *i. e.*, work at night leaving their family and children alone at their small huts in isolated places outside the town. The male labourers have the confidence that their women are working at some safe place at night.

The word " factory " in clauses 2 and 3 of section 6 and clause 1 of section 7 should be replaced by some other word or expression so as to make it clear that the provisions of the Act, *i. e.*, its restrictions and prohibitions, refer only to the place where machinery is worked by steam power, and not to the whole compound of a factory. I see no objection to the shaftings being cased in between the drums. Women should be prohibited from working in front of the opener. At present no woman is so employed in this district. The accidents from stones being hurled out are few and far between. In my experience I have not heard of any such accident. As for accidents from fire there should be in the press building sufficient number of door ways, each not less than 4 feet broad with broad and strong staircases for escape. There was no accident of any serious nature in my factories and presses during the last five years.

Oral evidence.

Witness stated that he controlled four ginning factories, containing 184 gins and four presses, and he had had eight years' experience. For two months in the season the gins worked day and night Females fed the gins, and earned three annas a day. If women were prevented from working at night they could not be replaced by men. Occasionally the gins worked up to 9 P. M., and on those days they employed extra females. There had been a few slight accidents in his factories but never a fatal one, and no one had ever been burnt from fires originating at the opener. Children were not allowed in the factory, and those who were brought into the compound by their parents to assist in stacking and picking cotton ought not to be considered as coming within the scope of the Act. At present it was very difficult to explain the matter to the satisfaction of the inspector, if he found unregistered children in the compound. These children were not paid by the factory, and were brought there by their parents. If the Act applied to those children then owners would be put to the trouble of keeping a register. A restricted twelve-hour day would not adversely effect the ginning industry. The rates of pay had increased ; five years ago women only earned 2½ annas.

Witness No. 238.

Rao Bahadur R. N. Mudholkar, Amraoti.

Rao Bahadur R. N. Mudholkar.

Written evidence.

There is no justification for imposing any limit by law to the time during which adult males labouring in factories should be allowed to work. No demand for such a limit has been made by the operatives themselves. Their physique has not in any way suffered from the so-called long hours. The mill hands are not weaker or sicklier than labourers of their class and position in other industries. Indeed so far as wages go their lot is far superior to that of the latter. They are in a position to live in better quarters, have fuller and more substantial meals, get better clad, have more of the joys of life than the " forty or fifty millions who " (as Sir William Hunter, Director-General of Statistics, Sir Charles Elliot, Lieutenant-Governor of Bengal and a host of

other high officials have testified) "pass through life on insufficient food", "never know what it is to have their hunger fully satisfied", "can have only one meal a day." In no other trade, profession or calling is there such restriction of hours of labour. Even in the higher ranks of Government service and the professions of medicine and law men have to work for 13 or 14 hours a day. Looking to the conditions of the labour market in India, the manner in which work is carried on in factories, the nature of the climate and the habits of the people, it would not be just or wise for Government to take any action interfering with the freedom of adult males to work when and how long they like. It is openly said not only by factory owners, but by friends of the operatives and the general public as well, that the cry which has been raised against the excessive hours of work has its origin not in disinterested humanitarian considerations but in the jealousy of interested rivals, who are taking advantage of the political power they possess to crush the slowly-reviving industries of this country. There are spheres of labour where the conditions under which workmen have to live and drudge are far more degrading and exhausting than in the spinning and weaving mills. When absolutely no heed is paid to them in spite of unpleasant disclosures, and the only trades selected are the newly established factories, it is only natural if people draw the obvious inference which such a procedure suggests. There is a very bitter feeling which has been created by this fresh attempt to put heavy shackles on the innocent industries of this country. Whatever might be the clamour of the working classes or the capitalists of Great Britain, the Government in England and in India which ought to represent the highest side of the mind and character of the British nation should not succumb to it, and should refrain from perpetrating further injustice on the manufactures and trade of India. The injustice and errors of the past are serious enough. Steps should be taken for removing their memories from the minds of the people. There is already considerable unrest in the country. It is not confined to the educated and the semi-educated classes. The treatment which Indians are receiving abroad in British Colonies has roused great resentment and if any further interference with Indian labour and capital on Indian soil is indulged in, it is difficult to say what the consequences might be. Nobody who cares for the good of England or India should tolerate any proposal or measure which is not based on even-handed justice and far-sighted wisdom. Coming at the present time, any restrictions imposed on labour will rouse a storm, the strength and intensity of which it is difficult to forecast or measure. The discontent which would be generated would under any circumstances rankle for years and generations to come in the minds of the people and would seriously imperil the good feeling which ought to exist between England and India. It is a mistake to suppose that long hours are imposed by powerful capitalists upon weak and powerless labourers. The labour market has become contracted. The demand being more than the supply, wages of even unskilled labourers have risen 40 and 50 *per cent.* If even under these circumstances labourers consent to work for 13 or 14 hours it is because they find that it is to their advantage to do so. No mill owner can afford to pay the same wages for working for 12 hours that he does for 14 hours and the operatives would begin to curse the interference which reduced their remuneration. It is not a small number which would be affected and the Government would be creating a powerful class of discontented people with a real and solid grievance and as the grievance will be a continuing one the number of these animated more or less by a spirit of exasperation would also go on increasing, the Indian mills do nominally work for 13 or 14 hours a day. But it is sufficient for one having some knowledge of mill industry as it is carried on in England to pay only a couple of visits to be satisfied that there is no analogy between the conditions of mill life in that country and in this. The number of operatives for the same number of spindles or looms employed in Indian mills both in spinning and weaving operations is many times more than in England. They perform their work in a far more irregular, inattentive and inefficient manner, turning out *per* head a far smaller output during their week of 80 hours than what the English operatives do in their week of 55½ hours, and neither in closeness of application nor in intensity of energy can there be a comparison between the two sets. It is the experience of Indian mill owners that out of the nominal 14 hours the adult male workers take at least an hour more for odds and ends of rest in addition to the ½ hour laid down by the Factory Act. In England women and even girls are employed for work which in India is done by adult males. Even if a time limit of 12 hours is laid down by law they will not be able or willing to work steadily with close application all the time. A reduction in the legal hours of labour would be productive of loss to the operatives and to the whole country. If in spite of the general protest which has gone forth, the Government insist upon putting a limit on legal hours of work for adult males then what might be done is to lay down that an adult male shall not be "*actually employed*" for more than 13 hours during a period of 24 hours the term "actually employed," carrying the meaning attached to it by section 10 paragraph (2) of the Indian Factories Act (XV of 1881 as amended by Act XI of 1891). Section 4-A of the Act already lays down that except where a system of working by shifts or sets is approved of by the local inspector there shall be a complete stoppage of work for a full half hour between 12 noon and 2 P. M. The legal working day should be from 5 A. M. to 8 P. M. which would leave sufficient margin for factory owners and operatives to arrange hours according to their convenience. I have not come across any cases of illegal employment as adults of persons between the ages of 12 and 14 in factories, and can offer no opinion as to whether such employment has a deteriorating effect on their physique. But going by appearances, which is all that a layman can rely on, it does not appear that the adolescent mill population is weaker than that in other industries. The young mill hands may have to work long hours but they have a far more regular supply of plentiful food than other juveniles belonging to the labouring classes. Neither boys nor grown up persons will go on working day after day beyond their enduring capacity except when owing to scarcity of work no option is left to them. I do not think that persons between 14 and 16 work in a month as many hours continuously as adults. No regulation by law is in my opinion required for the simple reason that no necessity for it has arisen. Legislation in anticipation is to be deprecated. But if action is unavoidable then a provision might be inserted in the Factories Act directing that youths between 14 and 16 years of age should not be actually employed for more than nine hours during a period of 24 hours. It would be preferable to have such a restriction applicable generally than leave it to an inspecting or examining officer to determine

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individual physical fitness. If the employment of women at night is likely to promote immoral practices or otherwise to produce morally prejudicial results or would affect their health then it should be prohibited. But though I have made enquiries in several quarters I have been unable to find any justification for saying that these evils do or will result. Women are employed in considerable numbers in ginning factories and many of these work day and night. No case has been known to me or to the managing Directors or the officers of the factories with which I am concerned. I daresay that there might be cases unknown to us. But such morally loose persons must exist in every profession and class. I do not know that employment during night has any material effect one way or another. I am firmly convinced that all such restrictions are not demanded by any necessity, are utterly futile, and produce harm to the class for whose supposed protection or benefit they are advocated. People cannot be made virtuous by such kind of legislation. Those who want to go wrong will go wrong even if employment during night is prohibited The only effect of such a prohibition is to throw obstacles in the way of poor people obtaining their livelihood by honest employment. The minimum age of nine fixed by the Factories Act for the employment of children is sufficiently high. No change is required in this respect. I am positively against the proposal that before a child is employed in a factory there should be a certificate obtained not only of age but of his physical fitness. Though it is not easy to prove such things in a Court of law or even before a Commission, unless a statutory promise of pardon is given to persons giving evidence, it is notorious that the system of certificates wherever it exists is utterly demoralising while it produces little good of the kind expected by its promoters. There is already too much departmentalism, too much of red tape and interference with the private lives of people. There will be serious injury done to the working classes by requiring the production of health certificates. It is difficult to comprehend the humanity which would condemn children to starvation on the plea that their health would be injured by working *in a factory*. Who is to pay for these certificates ? The employers ? I do not suppose they would. The poor struggling parents of the unfortunate children ? That would be cruel. Even if Government appoint a paid agency and lay down a rule that that agency should not levy any charge for examining children and granting them certificates there would be a risk of oppression and corruption. Apart from dishonesty much hardship would be caused by a too exacting standard being insisted upon, a contingency not at all remote. So neither for admitting half-timers or for raising half-timers to full-timers should a certificate of health be required. There would no objection to lay down by law that wherever children are employed in actual factory work they should be employed in regular sets I use the words " actual factory work" because I know of instances where children employed for picking cotton in the open grounds outside the factory house were thought as coming under the Factory Act. It would not be just to throw on factory owners reponsibility for the education of the children employed in their factories. This is a duty which belongs to the State and to the whole community. The proper course to adopt in regard to these children is to have a school outside the factory but not far from it where elementary education should be provided for them out of the public funds. The cost might well be defrayed out of the excise revenue obtained from mills. Non-working young children accompanying workers should not be allowed to be taken to dangerous or unhealthy parts of factories. Every factory employing women should have a shed or house where the young children of workers might be left by the mothers. A matron or a caretaker as in famine camps should be put in charge of these. The health of workers should be protected against noxious or impure air. What measures should be taken to secure this aim should be determined by the advice of medical experts who have knowledge of the Indian climate and Indian industries. Latrine accommodation in the proportion of one seat to 25 persons should be provided and there should be separate urinals. There is no objection to requiring doors of working rooms to be so hung as to open outwards. I am not at all sure whether the provisions about protection of machinery, hoists, teagles, &c., are not at times carried too far. I have heard engineers and practical men question the propriety of orders issued by inspecting officers about fencing or covering hoists and teagles. I do not think that the conditions of the different provinces of India permit of uniformity in all matters of detail. The general principles being settled by the Factory Act, the rules under it should be so drawn up as to suit local peculiarities. There is no need to appoint full-time medical inspectors. It would be an unnecessary waste of public money and is likely to result in harassing interference. I represent the Amraoti Cotton Manufacturing Company, Limited (which has ginning and pressing factory) and the Shirala ginning factory, of both of which I am Chairman. I also am largely interested in the Akola Native Cotton Ginning, Pressing, Spinning and Weaving Co.'s factory and the Akola Cotton Ginning and Oil Manufacturing Company. I was a Director in both these Companies for some years. My brother is Managing Director of the second and a Director in the first of the above mentioned Akola concerns. The Amraoti Cotton Manufacturing Company Limited employs—

	Men.	Women.
For ginning	12	48
For pressing	50	6

This is exclusive of the office staff, the two engineers and 18 persons employed on boiler and engine work and general work. These operatives are not employed all the year round but only during the season and then only on days that the factory works. The Shirala factory gives employment to 32 women and 10 men, exclusive of the office and the engine and boiler and general staff. This year the Amraoti ginning factory worked for 24 days night and day, for about 5 days between 14 and 15 hours, and for about 35 days for 13 hours from 6 A.M. to 7 P.M. I am sorry that owing to pressure of urgent professional and private business and other engagements I could not get the figures from the Akola and Shirala factories with which I am connected, or the previous years' figures for the Amraoti factory. I have mentioned above that I strongly deprecate the proposal about the production of a health certificate. It is objectionable on principle and not at all easy to carry out in practice. If, however, the proposal is accepted by the Government care should be taken to see that no hardship results therefrom. A factory owner should be at liberty to employ children or to raise half timers provided he gives notice to the

inspector of his intention to do so or sends a report within 24 hours of his having done so. It should be the duty of the inspector to make the examination as early as he can. The examination should not be entrusted to people who have not had knowledge of India. Inspectors for factory work also should not be men who are new to the country, ignorant of the people, their conditions, habits and customs. I am strongly against too much State interference. The creation of such inspecting officers means not only heavy expenditure of the public funds but an amount of irritating, harassing and often oppressive interference. Rao Bahadur R. N. Mudholkar.

Witness stated that he was connected with the directorate of certain ginning, pressing, and spinning companies in Amraoti and Akola, but he had no direct experience of the actual working. He always visited the factories he was connected with. He was interested, however, in industrial problems, and years ago he was in the habit of visiting the Bombay mills. It was his opinion that twelve hours work a day was the limit where men worked continuously, but taking into account the conditions of work in India, *viz.*, that adults cannot work continuously at a stretch for more than 3 or 4 hours, the nominal hours of labour must be longer. On his present physique the Indian operative was incapable of applying himself intensely to any kind of work for 6 hours without intermission, and there could be no improvement in application without improvement in physical condition. The general working hours in his factory at Amraoti were from 6 A.M. to 7 P.M., with half an hour's interval; but occasionally they worked to 9 P.M. They had done so on five days this year. When witness prepared his written evidence he was unaware of the length of the working day at Agra. Thirteen hours was the very utmost that a man should be asked to work in India, and the conditions existing at Agra ought not be tolerated. He would not favour a general restriction of hours; but would if necessary give power to Local Governments to introduce restrictions where required, *e. g*, in those places where the demand for labour was not so great as the supply, and the workmen could not protect themselves. A young person of 14 years could not do the work of a full grown adult and he approved of the creation of a class of "young persons" whose hours should be limited to twelve. It would in that case be possible to run the mill for longer hours by a system of shifts. In the event of the creation of the "young persons" class, he had no intention of stopping his mill at the end of their hours, but would work the mill by adult labour for an extra hour. If women were prevented from working in the gins at night the industry would be affected, as sufficient men would not be available and those who did work would want wages almost double those given to women. The women were paid three annas a day, or three and half annas for night work. There was no moral evil due to women working at night, and the difficulty of the children could be got over by the gin supplying a room for their accommodation. He had no objection to the rejection of children suffering from phthisis or other diseases which would make their presence in a factory a danger to others. With regard to the statement in his written evidence that the system of granting certificates was demoralising he could not then and there give specific instances showing the existence of objectionable practices, concerning the granting of age certificates to children for factory work. In this direction he had no personal knowledge of any abuses. He could say that he had heard of various cases regarding age certificates. He thought it desirable that factory owners should have the option of giving two separate half hour intervals instead of one long midday interval. At present there was a lack of continuity in inspection, and it was alleged in some quarters that small factories, unable to carry out the alterations ordered, made monetary payments to the officer concerned. *Oral evidence.*

WITNESS No. 239.

Mr. A. B. Mobedji.

The working hours of adult males may be limited, but I do not think that the physique of the workers is affected by long hours, compared to the working hours of men in outside employ who work equally long. If working hours are to be limited, then 12 hours a day, including intervals of half an hour each, should be the limit. The first one from 10 to 10-30 A.M. and the other from 2 to 2-30 P.M. The mode of enforcing the restriction would be by legislation. I would not fix the actual hours, but leave it to each manager to fix his own hours, making it compulsory on them to give notice at the beginning of each month of the hours fixed. I do not know of any illegal employment of adults between the age of 12 and 14; consequently I do not think a special class of workers corresponding to young persons under the English Act is necessary. There is no necessity to maintain a special register of all workers under the age of sixteen. The employment of women at night should be prohibited except in ginning or other seasonal factories. The minimum age at which children are allowed to work in factories should not be raised beyond nine. Certificates of age should be required before children are allowed to work in factories. Certificates of age and physical fitness should not be required when children who were half-timers are allowed to work full time. Children should be employed in morning and afternoon sets, or double sets, at the option and convenience of the owners of factories. The factory owners should not be obliged to provide elementary education at their own expense for children working in their factories. The prohibition against non-working children, accompanying workers to dangerous and unhealthy parts of factories, is enforced as far as practicable, but it is difficult to prevent them from coming into the factory compound. I do not think any legislation is essential to prescribe a standard of purity of air for Indian mills. It would be difficult to prescribe a standard of moisture for the air in Indian factories, with reference to manufacturing processes and to the health of workers, as existing conditions vary in each mill, as well as owing to the variety of climatic conditions in the several provinces. The construction of most of the humidifiers necessitates the use of clean water of normal density, and no legislation therefore is necessary. The standard of latrine accommodation should not be raised to one seat for every twenty-five workers, because the present standard is sufficient. It would be better to prescribe that all doors of working rooms should be hung so as to open readily from the inside outwards in case of fire. I do not think that further précautions for fencing machinery are necessary in our mills. Arrangements should be made to secure uni- Mr. A. B. Mobedji. *Written evidence.*

Mr. A. B. Mobedji.

formity in the administration of the Factory Act throughout India. There seems no necessity for full-time Medical Inspectors of Factories. I represent the Berar Manufacturing Company. The number of men employed is 713, of women 152, and of children 107. The number of days our factory worked during the last ten years over 12½ hours a day is in 1898—100; 1899—109; 1900—123; 1901—156; 1902—90; 1903—113; 1904—122; 1905—141; 1906—216; and 1907—224. The average daily number of hours during the last ten years' period is in 1898= 11 hours 30 minutes; 1899=11 hours 53 minutes; 1900=12 hours 39 minutes; 1901=12 hours 27 minutes; 1902=11 hours 50 minutes; 1903=11 hours 56 minutes; 1904=12 hours 9 minutes; 1905=12 hours 4 minutes; 1906=12 hours 2 minutes; 1907=11 hours 56 minutes. Certificates of age, only should be required prior to the employment of children on half-time, but it would be better to prescribe a week's limit within which the employee should be allowed to work pending examination for a certificate. If a child nine years old, when admitted as a half-timer, is provided with a copy of the certificate of age no other certificate is necessary when he begins as a full-timer. I am not aware if the law is improperly evaded by allowing half-timers to work before being examined by a certifying officer. The question of physical fitness in the case of adults should, in my opinion, be left alone. I am not in favour of the suggestion to create a class of young persons as in the United Kingdom. If hours are to be limited, it would be preferable to fix a maximum number of hours, leaving it to the discretion of each individual employer to settle the time for the commencement and termination of the day's work. I do not approve of the suggestion that Factory Inspectors should be obtained from the United Kingdom, where conditions are so different from those in India. I do not see any special advantage in having inspectors trained in England but locally selected inspectors might be sent to England to gain experience. There is no doubt that the health of the employees suffers considerably owing to their most unhealthy surroundings; and it is an acknowledged fact that the men keep better health when living in the vicinity of their mills than those who live in the unhealthy parts of the city.

Oral evidence.

Witness stated that he had had eighteen years' experience in the cotton industry in India, eight years in the Swadeshi Mills at Kurla, Bombay, and ten years in the Empress Mill, Nagpur. During this time he had not observed any deterioration in the health of the operatives, and the absence of old men from mills was attributable to the fact that they did not like the confinement for so many hours. The work that the children and young adults had to do was not a strain on their health. He considered that as a class the operatives were as strong as the agriculturists. He approved of a twelve hours' day; eleven hours of work and two intervals of half an hour each. This had been introduced with successful results in one department of the Empress Mill. He thought that with the shorter day the operatives would apply themselves more steadily and there would be no material decrease in production. It was essential that the working day should be uniform, otherwise he would have to work as long as his neighbours, and this competition led to long hours. In the Badnera mill there were some children under fourteen years of age on full time. They had been certified at nine years and their present age was computed from the old certificates. In his opinion the labour supply was not available for twenty-four hours' working and in any event the night production would not be so good as the day production. They sold their yarn and cloth locally, though some cloth went to Calcutta and Northern India. The Swadeshi movement had helped them considerably and had sent up the price of cloth by about ten *per cent.* He approved of women being allowed to work at night in gins He did not allow non-working children in the factory, and children-in-arms should not be allowed in the reeling room. Provided the method of testing air was simple, and the owners sufficiently protected, then he had no objection to a standard of purity of air being fixed. The factories in the Central Provinces were not too scattered to permit of their being covered by one full-time inspector. The Act should be uniform all over India, and should be strictly enforced everywhere. He approved of one general inspecting officer for all India.

WITNESS No. 240.

Rao Saheb Deorao Vinayak, Akola.

The factories under my charge are :—

Rao Saheb Deorao Vinayak, Akola.
Written evidence.

1. The Akola Native Ginning, Pressing and Spinning Company, Limited.
2. The New Akot Cotton Ginning and Pressing Company, Limited.
3. The Akola Cotton Ginning and Oil Manufacturing Company.

Information about the number of men, women and children employed in each of the factories will, I believe, be of very little use to the Commission. There are gins, presses and an oil mill and a spinning and weaving mill newly started, and the number of operatives in them is not settled or certain, as the whole of the machinery is not yet fully working. Gins and presses besides are worked in the cotton season only, and their working depends on the state of the cotton crop of every year. I think it should be permissible to employ half-timers pending the examination for a certificate. This is necessary because the inspecting officer's attendance cannot be secured except according to his convenience. In order that the working of the factory should not be hindered owing to any delay caused by the principal medical officer being on tour, the officer acting for him in his absence should be authorized to give certificates provisionally at least. The question presupposes the contingency of the law requiring a certificate of physical fitness as well as of age in case half-timers are employed. But in my opinion no certificate of physical fitness is necessary, for factory owners are not interested in employing unfit children. I may, moreover, state here that physical fitness is a very indeterminate factor, and no two doctors in the same place will be found to agree. This will leave room for irritation and suspicion. The suggestion to make compulsory a medical certificate as to fitness of a half-timer to work as an adult, is, in my

opinion, unnecessary. It will not serve the interest of either the employee or the employer. It is unprofitable to a factory manager to employ a sickly person on full wages as an adult. He would naturally take care to obtain full return for the wages he gives. The employee, on the other hand, would not knowingly ruin himself by accepting employment as an adult if he is not fit to work as such. This is a matter solely of contract between party and party, and should, I think, be left to them to settle. I do not think that any safeguard by way of legislation is necessary to prevent half-timers who are refused certificates in one factory from being admitted as adults in another. The existing law is sufficiently elastic, and there are inspecting officers to detect any illegality. Examples made of wrong doers will deter others. I am not in favour of creating a special class of "young persons". India stands on quite a different footing from the United Kingdom, the strength of the workmen, the climate of the country, the mode of work, and the habits of the workmen, in the two countries are not the same. One man in the United Kingdom can, it is shown, turn out work for which in India at least two men are employed. The habits of workmen and mode of their work in India is also not similar to that of Englishmen, and therefore it is not fair to put both on the same footing. The young persons would earn less than what they earn now, and would remain always discontented. The provision supposed to be beneficial to them is not so, and will be looked upon by them also as detrimental to their interests, and Government's object will be misunderstood. The suggestion, if it means anything, means that "young persons" should not be heavily pressed with work. It is, I believe, the experience of every factory manager that in this country out of 13 hours working day the workmen actually work hardly for 11 hours, and in no case I believe they get themselves heavily pressed by work. If you reduce their hours of work, this step will, I am sure, tell very heavily on mill working in general. Suppose this class of persons is made to work for a shorter period, and is placed in charge of a department—say preparation—its production must necessarily be less than what is required by the other departments to turn a full day's work. The factory manager will have either to close his factory for some time every day, or to employ extra hands in the preparation department to make up the deficiency. Both ways he is a loser, In a mill the wages are regulated by production. I mean they are paid on the *piece work system*. The man gets less if he works less, and apparently it looks as if the factory owner loses nothing But in reality it is not so. He loses a good deal as shown above. It is not at all profitable to him to employ youths when the work requires a grown up man. The matter is quietly settled between master and servant, and does not require outside interference.

Rao Saheb Deoras Vinayak.

The proportion of children, women and the so-called "young persons" to the adult is sufficiently large not less than 40 *per cent.* in a mill, and if extra restrictions are imposed in the way suggested, I am sure the working hours of a mill will have to be changed and machinery stopped, for a few hours every day. The proportion of young persons (age 14 to 16) to adults in my mill is 1 to 3 in the spinning department. In bigger mills it may be greater, and the amount of loss heavier. I am decidedly against reducing the adults' working hours. Every adult is or at any rate should be the master of his own time, and should be left alone to decide what is to his benefit. In the United Kingdom a workman during *actual* working time rigorously sticks to his work, and usually wastes no time. That I hold to be the secret of turning out double work in about half the working time, as compared to the Indian workman The Indian climate again does not allow a workman to take to work in the same way as the United Kingdom man can. He is not so strong and skilful as the English workman is, and takes longer time. With all the existing freedom the Indian workman is not capable of producing half the work of an English workman; to compel him to work for shorter time still is to deprive the mills of what scanty gains they make. It will benefit neither the employer nor the employee Looking to the demand and supply of piece goods in India, and taking into consideration the figures of imports and Indian production, it is clear that India must necessarily depend on outside supply of goods for a considerable time to come. India supplies at the most one-third of the demand of the country. The remaining two-thirds come from outside. The labouring class is admittedly in a wretched condition. The hand loom industry is not all that can be expected. Indian cotton cannot for a long time be used to weave fine cloth, the supply of which must necessarily remain in the hands of the outsiders, at least for a generation or two. The Government are for all these reasons and also for political reasons anxious to improve the existing conditions, and are seriously considering the question of devising means for the betterment of local industries. It will be nothing short of frustrating their object if some such restrictions as are now suggested are imposed, and mill work is handicapped. The mill industry in India is in its infancy. Its increase means so much profit to the European machinery makers, and so much benefit to the labouring classes who hitherto have been confined mostly to agricultural pursuits. A well-to-do labouring class is a source of strength, and an effectual weapon against famine and plague. The Government of the country is therefore naturally ready to do all it can to help it. The present proposals, if they mean anything, are intended to discourage the mill industry, and they must necessarily be undesirable in the eyes of the public, as well as of the Government, who are both interested in promoting its development, so that there might thereby be an improvement in the general condition of the population entrusted to their charge by Providence, Famines and plague have their origin in hunger, and hunger cannot be satisfied unless more occupations—that is more profitable occupations—are thrown open to the working classes. It is consequently very necessary that Government should view unfavourably *all* suggestions which are likely to discourage mill industry in India, and to divert the labouring class from mill labour. The suggestion to reduce the number of working hours in mills presupposes that the mill work tells upon the health of operatives very heavily. If it is solely on these philanthropic motives that this suggestion has originated, then the first condition to justify it, is to show that mill labour is detrimental to health in much too large a proportion as compared with other labour. My experience, however, is quite the other way, and I don't think that medical opinion in general so far as the *mofussil* is concerned is different from this. I cannot say about Bombay mill labourers; but in the *mofussil* my general impression, which is based upon observations extending over 22 years in my concerns, is that if any labourers in our province are better off than mill labourers both as regards physique and means they are only the *hamals* who work outside the factories. It may be thought that field labourers who work in

Rao Saheb Deorao Vinayak.

fresh air are superior, but as a matter of fact they are not so. Exposure to sun and rain and uncertainty of employment tell more heavily on their physique than is generally supposed. Perhaps a well-to-do owner of a field working for himself may be found superior to a mill hand, but the person to be fairly compared with the latter is the *day labourer* in the field, and not the person above mentioned, and I am decidedly of opinion that a person who works in the mill is in no way inferior to a field labourer. He has ampler means of enjoyment and for providing for his family, and generally lives longer. Of course this is my personal impression and I cannot produce any figures to support this just now. But I have been collecting them and shall be glad to place them before the Commission if permitted to do so. Supposing, however, that my impression is incorrect, is it intended, I respectfully ask, to drive mill labour to outside labour? When a factory does not work day and night continuously, the usual time of working is between 5 A.M. and 8 P.M. The factory managers regulate their working hours according to the convenience of all concerned, and as circumstances permit. I therefore opine that the present system need not be altered by fixing hard-and-fast rules. I am not in favour of the suggestion of obtaining factory inspectors from the United Kingdom. To carry out the work of factory inspection according to the spirit of law, it is not at all fair to appoint an officer who is ignorant of the habits of the working people and the circumstances under which the factories are worked in India. If an officer of Government enters a factory with a view simply to find fault, he will find occasion for it at every step, as there are a number of women and children on work, and irregularity must exist among them in spite of precautions. To be very strict in inspection is not desirable, but to be lenient at the cost of discipline is also not what I wish the inspecting officer to be. You require therefore an officer who combines sense of duty with tact. I would certainly have for inspecting officers those gentlemen who have experience of working in factories, and who know what difficulties factory managers have to contend with. Such officers will while carrying out the provisions of the law, not at the same time harass factory hands and managers unnecessarily.

Oral evidence.

Witness was of opinion that under the present system of inspection there was a break in the continuity of policy. Every inspector had his own ideas, which he wished to carry out and witness therefore favoured one fixed policy of inspection to be adopted everywhere. He was of opinion that factory labourers were equal in physique to labourers in outside employments. A person of 14 to 16 years of age was equal to a full day's work, but was never given any hard task. There were many boys who would not come into the mills if employed generally on such work as ring frame sider's work. They preferred outside work, not because factory work was exhausting, but because outside work was easier and not very responsible. He felt that no restriction of hours was necessary, but at the same time it was never his intention to work his factories longer than 13 hours. In fact the men themselves would not work beyond that period. There had been fires caused by the opener, but there had never been a fatal accident due to fires originating there. Last year an oilman caught his hand in the line shaft; he was drawn in and killed. A fixed twelve-hour day would affect the cotton industry adversely, as the men would not improve in application, and there would be a decrease in production.

Witness No. 241.

Lala Pragji Liladhar, Karanji.

Lala Pragji Liladhar *Written evidence.*

I am chief agent of Messrs. Moolji Jaitha and Company, Karanji, and have been managing the press factories for 31 years, and the gins for 22 years. Our company has three ginning factories and four cotton presses in Berar. In the press factory generally 60 to 70 men and 10 women, are employed daily. Our Karanji ginning factory has 100 gins. It has been working for the last 22 years. When the factory works 139 women and 102 men are employed daily. It works from 6 A.M. to 6 P.M., and the recess is given to the employees by turns. In the same way we manage for night shift, if necessary. Extra women are employed so that the workers can take intervals of rest. A second engineer is employed when night work is going on. I do not think it necessary to have the gin and press factories under the Factory Act. If the Factory Act be extended to these factories, those presses and gins which are on a smaller scale and do not come under the Act, would derive benefit. I think that there should be no bar to the employment of women at night, as it is a means of earning a livelihood, to those who would not like to appear in the day-time as labourers, on account of social environment. If the women are altogether prohibited from working at night, it will be impossible to get men enough for night duty; moreover, the wages of men would be 6 annas to 10 annas, while those of women are annas 2 and pies 6 to annas 3. Leaving aside the question of extra cost, the male labourers are not found sufficient for the need; and the extra expenses incurred would be a direct loss to the agriculture. I have not observed during my management that the physique of the employees has deteriorated by working in the factory by day and night shifts. If the Factory Act is to be extended to press and gin factories, it ought not to be more restrictive than it is at present; and the wording of the Act should be plain and simple so that there may be no occasion for the inspectors to interpret the sections as they wish. In the gins the work entrusted to women is not at all as fatiguing as the field labour. At present the inspection of factories is entrusted to several revenue officers, who I think have little experience of the difficulties of working; and as they have other important matters which engross the greater part of their time their inspections are not advantageous. I think inspectors of factories should be experts who could deal with questions both from a mercantile point of view and also the safety of the individuals employed. There is a necessity for a separate Department for this. I wish to draw the attention of the Commission to the fact that the work of the press and gin factories is carried on during the year on an average for 130 days. The ginning and pressing have to be done according to the desires of the merchants, as they have to look to the fluctuations of the market and their contract deliveries; and if there were any restrictions on working them at appointed times it would be a great loss to the merchants, to the owners of the factories, and also to the labourers. There has never been an accident from fire in our gin factories which

endangered the life of the employees. From the commencement of gin factories in Berar male labourers have never done the work of getting the *Kapas* ginned, and it is work which could be advantageously done by women, as in the reeling department of the mills. Lala Pragji Liladhar.

NOTE.—The witness could not conveniently attend for oral examination.

WITNESS No. 242.

Mr. Jafarji Mullah Haptullabhai, ginning and pressing factory owner, Amraoti.

Witness stated that there were 110 gins in the factory; when all were at work he employed 78 men and 176 women. In the press he employed 50 men and 6 women. No children were employed in either factory. He had owned the factory for about nineteen years. Last season (1906-07) the ginning factory worked for 53 days and four nights, and the press factory for 63 days. If women were prohibited from working at night, it would mean a great loss to the industry. There would be a scarcity of men for night work, and those who worked would want double wages. The profit this year was not much, because, owing to a disagreement, there was no pool in Amraoti. As a rule the cultivators sold the cotton to *bunias* who paid them at once, and it was the *bunias* who brought the cotton to be ginned. There were some females who would not appear in public in the day-time, but who liked night work. They were ashamed to work in the day-time, but had no objection to night work. There might be only a few of this class. There was no difficulty about the children, as the mother looked after them during the day, and then put them to sleep, while they themselves came to the gins. Witness employed 38 more women than were required for the ordinary running of the gins. They were not relieved at stated intervals, but they probably had two hours off a day. Witness paid the hands himself. He objected to the application of the Act to gins, as the inspectors interpreted the Act differently. Last year they built latrines of brickwork to the order of one inspector, and then a new inspector refused to pass them, and ordered new latrines of galvanised iron. Witness lost Rs. 1,000 thereby, and he was told that if he did not make the alteration he would have to close the gin. No females worked in front of the opener, and there had been no accidents at his opener. It would be a great hardship to the women if they were not allowed to work at night. The work was only seasonal, and the women looked forward to the prospect of earning a few extra rupees. When the gin worked only a few nights in the course of the season he borrowed the services of an engineer from a ginning factory not at the time at work. He paid his engineer Rs. 125, and could not afford a second permanent engineer for the few nights that the gin might work. The men in the compound earned from six to eight annas a day, and the women in the gins about half that sum. The usual working hours were either 12 hours or 24 hours, and in the latter case they employed an entirely new gang of labour. But in emergencies they sometimes worked for 15 hours with one shift, the wages for the extra hours being 25 per cent. above the ordinary rate. The engine always stopped for half-an-hour at 12 o'clock. The gin always stopped on Sundays, but the hands came to receive their wages, and clean up, leaving about 9 A.M. There was no necessity to case in the line shaft between the drums, as only the oilman and *mochi*, wearing suitable clothing, were allowed there. In the course of 20 years there had been no accidents with the line shafting. In order to lessen the chances of fire from the opener, the beaters were made of wood and not of cast iron. There had been no accident of any kind in his factories during the last five years. Mr. Jafarji Mullah Haptullabhai. *Combined oral and written evidence.*

PULGAON.

WITNESS No. 243.

Rao Bahadur Trimbak Rao Sathe, Pulgaon.

Rao Bahadur Trimbak Rao Sathe. *Written evidence.*

We have a ginning mill situate in the compound of the Pulgaon spinning and weaving mill, belonging to the same company. The number of men and women usually employed in the gnining mill is 30 men and 40 women. No children are employed. Our ginning mill was started in the season of 1906 in which we commenced the ginning work on 9th December 1906 and stopped it on 24th April 1907, In the current year's season it was started on the 19th November 1907 and will probably be closed in the beginning of May. This depends on the state of the cotton crop and its appearance in the cotton market. Cotton is not brought to the market on this side before November and the middle of the month is usually the time when the ginning work is commenced. It is closed at the end of May, or the middle of June when the crop is bumper. In the case of our ginning mill we gin only our cotton required for our spinning and weaving mill, so we have at present no need of continuing the work beyond the beginning of May or so, and the quantity we gin is about 3,000 bales—each of 400 lbs. We work our gins from sunrise to sunset : but in some of the gins situate at Pulgaon owned by others, the work is commenced at sunrise and continued late in the night. In factories owned by large firms, such as Ralli Brothers, the ginning is done both day and night. Persons employed in our ginning mill work for 12 hours with half an hour's stoppage in the middle of the day, as in our spinning and weaving mill ; besides we employ 6 women as relievers during the actual working hours, so that the ginning operation at any of the gins may not be stopped owing to the absence of the women working at it for drinking water, calls of nature, etc. All ginning mills should be brought under the Factory Act for the following reasons :—

(*a*) One of the objects aimed at in the Factory Act is to look to the safety and to protect the health of the labourers. There are the same dangers to affect these in the ginning mill as there are in the spinning and weaving mill to which the Act applies.

(*b*) In many places labourers employed in the ginning mills are such as have been working in the spinning and weaving mills which they leave during the ginning season on the prospect of getting higher wages, so their health and safety should be equally looked to while working as gin labourer as is done when they work in the spinning and weaving mills.

The rule, if any be made, that the employment of women on night work should be prohibited, should not be made applicable to ginning factories. Because the ginning work is done on this side only by women and that work has to be finished within a certain specified season which owners of large ginning factories will be unable to do if women are prohibited from being employed on night work. If the Factory Act be made applicable to all ginning mills it will be necessary to modify the general law in the following particulars :—

(*a*) Half an hour's stoppage in the middle of the day as required under section 5-A should not be insisted upon, provided extra hands as relievers, at a certain percentage are engaged .so that each worker can have an hour's rest during the working 12 hours.

(*b*) The rule about holidays under section 5-B should not be enforced.

(*c*) Prohibition against the employment of women before 5 o'clock in the morning and after 8 o'clock in the evening under section 6 should not be enforced ; their employment on night work should be allowed, provided no woman works longer than 12 hours, and a certain proportion of extra women, say from 10 to 20 *per cent.*, are employed to relieve the working women.

As regards (*a*) and (*b*) above the reasons are—it often happens that ginning operations must be stopped on account of unfavourable weather or stock of cotton to be ginned having run short. Under these circumstances the factory owners should be allowed to work their gins on any available days, provided no labourer is employed longer than 12 hours in a day. As regards (*c*) I have given my reasons above as to why the employment of women on night work should be allowed in ginning mills. I agree that formerly in some ginning mills the line shafting was not adequately fenced, and I have known an instance of a fatal accident due to this. At our ginning mill at Pulgaon we have got it cased in drums. There is one suggestion which I submit to make in connection with this shafting that it should be under ground, instead of it being over the head of the workers, as I have found in some factories, which is very unsafe. There should be a rule that the line shafting should be in every case under ground. As regards accidents from stones being hurled out from the opener, or from fire occurring there, I have learnt from a person having experience of actual working in this department that dangerous fires always occur outside and not inside the opener. In his opinion fire occurs from the friction of the stones dropping outside on some hard substance such as hoop iron matting, or from fire occurring inside the opener and communicated to opened cotton outside. Where the place of delivery of opened cotton is close to the delivery of the opener and if the place of delivery be kept at safe distance, say 20 feet or so from the opener and the opened cotton be allowed to pass thereto through a perforated zinc tube attached to the delivery of the opener, the velocity of the stones will be lessened and the fear of fire occurring will be materially reduced. We have no press of our own for baling cotton and there have been no accidents at our ginning mill during the two years of its existence.

From my experience of the spinning and weaving mill at Pulgaon in the Wardha District I come to the conclusion that the working hours of adult males should not be limited. We at Pulgaon and at the other spinning and weaving mills at Hinganghat and Nagpur have at present

our working time from sunrise to sunset. I append, herewith in support of my conclusion, a statement showing the average working time at the Pulgaon spinning and weaving mill per day and the average daily production of yarn *per* spindle in each of the 12 months. It has been based on the statistics for the last two years, 1906 and 1907. Rao Bahadur Trimbak Rao

Month.	*Average working hours per day.	*Longest time worked	*Shortest time.	Daily average production per spindle in 20's.	Number of spindles in 1907.	Number of workers in 1907.
	H. M.	H. M.	H. M.	Oz.		
January	10 25	11 10	10 50	5·02	18,336	Of 930 total number of workers, 579 labourers have been engaged in the spinning department.
February	11 7	11 40	11 10	5·36		
March	11 18	12 10	11 40	5 51		
April	11 47	12 40	12 10	5·75		
May	12 24	13 0	12 40	5 79		
June	12 20	13 0	12 30	5·68		
July	12 11	12 45	12 30	5·80		
August	12 8	12 30	12 10	5·73		
September	11 42	12 20	11 55	5·52		
October	11 7	11 50	11 25	5·20		
November	10 51	11 25	10 50	5·13		
December	10 40	10 55	10 45	5·34		
	Yearly average production per spindle is 5·51.					

* Including the 30 minutes stoppage under the law.

On referring to statement it will appear that our mill was worked longer than 12 hours only in May and June by 24 and 20 minutes, respectively; in July and August for about 12 hours; and in the remaining 8 months less than 12 hours. In January, November and December we have not been able to work even for 11 hours. As regards production we are behind the Bombay mills where the standard production is taken to be 6 oz. per spindle, whereas here even in the longest working days it has barely come to the standard figure, the largest production 5·88 oz. was in June when the average working time was 12·20. In May when the working time was 12—34 the outturn was only 5·79 oz., in July and August with 12—11 and 12—8 working time respectively it was 5·80 and 5·73. The reasons why the production in mills on this side falls short of the standard are principally the workers' habit of idling away their time during the actual working hours, which waste amounts to an hour and a half or so daily. They often leave their work on pretence of attending a call of nature, and stay away to smoke, etc., we don't get as skilful labour as they do in Bombay and other places. We can get over the latter disadvantage by and by, but I am doubtful whether the same can be said about the former for some time to come. Unexpert as I am, I think the physique of the workers has not been affected under the existing system of working. If it be deemed desirable that the number of working hours should be limited, I think it should be 12 hours excluding the stoppage of half an hour in the middle of the day, *i.e.*, the 12 hours, suggested by me, should be of actual working, or 12-30 in all. As to which those 12 hours should be, the factory owners should be left free to select their own time, to suit the seasonal and local conditions; because the rule—if one be made—that the same hours of commencing and closing the work should be observed in all factories throughout, will affect mills on this side where working in electric or any other artificial light is disproportionately expensive. The engine should be stopped for half an hour whether at 11-30 A.M. as is done at present at our mill, or at 12 noon, whichever suits the mill-owners, but that half hour must be continuous, *i.e.*, from 11-30 A.M. to 12 or from the latter to 12-30 P.M. The stoppage should be so arranged that the operatives will not have to work longer than 7 hours on either side of the stoppage. There has been no physical deterioration among persons between the ages of 12 and 14 and no such persons were ever employed as adults in our mill. No class of "young persons" need be created in this country. Here amongst the classes from which we get our workers no record of births is kept, and consequently their ages have to be ascertained only by other tests, and such tests give only the approximate age with a variation of a year or two even. So the class of workers based on this age-test is of no use in this country. I am of opinion that, once the age of a child labourer is certified by the medical officer as proper, there should be no second certificate for the child when promoted to the adult class, but if the medical officer finds at the time of his inspection of the mill any child physically unfit to work as an adult, he may put him back to work as a child if the latter likes, or disallow him to work at all. A special register of workers under the age of 16 should be kept to enable authorities to ascertain whether these persons physically suffer by working as adults. Women are mostly employed to reel yarn and in no other department of the spinning and weaving mills, and their employment at night should be prohibited. I have stated above that the age-test in our country does not give the correct age of a child worker, and the other test by which its age is fixed gives only the approximate age with a likely difference of a year or two. A child of ten may, under these tests, look as of 9 years and *vice versâ*. Children of cultivators and other classes

Rao Bahadur Trimbak Rao Sathe.

from which we get our labourers begin to assist their parents in their work even when they are younger than 9 years, so the present age limit should not be raised. Certificates of physical fitness end of age should be required before children are allowed to work in factories. But owing to some places of work being distant from the head quarters of the medical officer where children have to go for obtaining the certificates, if any children are unable to get certificates at the time of his visit to the factory, hardship is caused, and to avoid it permission to employ children without certificates should be given to the factory owners pending the examination of the medical officer. This suggestion is made in view of the present circumstances in connection with the medical inspection of our mill, which is done by the Civil Surgeon, who generally visits the mill at an interval of two or three months, when he also grants certificates to such children as appear before him. Others have to go to Wardha, his head-quarters for the purpose. No second certificate of age should be required for allowing children who have hitherto worked half time to work full time as adults. Factory owners should be given the power to allow child labourers to work as adults, if their first certificates show that they are 14 years, but at the time of his visit to the factory if the medical officer finds any child unfit to work as an adult, he may refuse to allow him to work as an adult.

At our mill children are employed in regular shifts and their time is changed after a month or so, *i.e.*, children of the morning shift begin to work at afternoons and *vice versa* at the end of each month. But there is one thing in this arrangement which requires a provision. A child of any *set* may not be able to attend to work with his *set* on any day for a good excuse, and he applies for permission to work in the other set so that he may not lose his earning for that day. I think the manager of the mill should have power to grant the permission, provided the child has not had to work that day longer than six hours or half time. I think it is a good arrangement that children should work in regular sets as we do at present, and this system should be prescribed by law with the above proviso. It is desirable that there should be some provision made for giving elementary education to factory children and I believe very few factory owners, if any, will grudge expenditure on this useful object if they are assured that the children will take advantage and learn at their schools. Under the circumstances prevailing in this country the children, after working for six or seven hours in the mills, would be required by their parents to attend to their younger relatives or to do some household work rather than send them to school. Besides, no test for giving education to children is yet found amongst the classes of our labourers. Wherever there are factories, there are Government primary schools, but I don't find that any children after working in the factories attend the institution which they would do if they have any test. I think the time has not yet arrived to compel the factory owner to spend any money on maintaining schools for children working there. Non-working children should not be allowed to accompany workers to dangerous or unhealthy parts of factories. So far as the factory owners are concerned, they should provide a place outside where parents or guardians of such children should keep them before going to their work and keep a person either female or male—the former is preferable—to watch them. If, after any such arrangement is made for non-working children, any be found inside the factories, their parents or guardians should be held responsible. So far as factories up-country are concerned purity of air is maintained if there are a sufficient number of doors and windows of sufficiently large dimension, for admitting good light and air and one or two fans, according to dimensions of the room, to fan out impure air. It is not necessary to prescribe an analytical standard of purity for air. It is also not necessary to prescribe a standard of moisture for the air in factories. This matter should be left to the discretion of factory owners who arrange it at present as is necessary for manufacturing processes according to the local climate and seasons, and no medical inspector has ever pointed out during the 15 years the different departments of our mill have been in existence that the health of the labourers suffered either from excess or deficiency of moisture in the air. There should be fixed some standard of purity for the water used for humidifying purposes. It should be quite clean and free from any bad stink. At our mill there are at present 32 privies—24 for males and 8 for females, and the standard observed is one for 35 persons, besides two separate urinals for males and females, each 30 feet long. There are four sweepers to clean them. The chief thing to be seen is that they are regularly and properly cleaned. As no need to increase their number beyond the present standard has ever been felt, it is not necessary to raise the standard of latrine accommodation. Separate urinal accommodation should be insisted upon. An arrangement of doors opening readily outwards from the inside, to help operatives to go out sooner from working rooms in the case of fire, should be prescribed. And I would add that in case of storeyed factory buildings there should be two or more staircases on their different sides, either of masonry or iron, or any fire-resisting materials, and their steps instead of being in one continuous flight from the top to the bottom should be in two or more flights according to the height of the storey from the ground floor. The first flight should be from the top to the middle of the staircase where there should be a landing place five feet square at least, and thence in two flights, one opposite the other or even in three if so many can be constructed, but two or double flights there must be. The width of the staircase must be five feet or larger equal to that of the doorway. The fencing at our mill and gins gives sufficient protection to the operatives and others who have occasion to go near the machinery. The several parts requiring fencing under section 12 of the Factory Act have been securely protected. The Factory Act should be administered to suit local circumstances and so the Local Government should have the power to frame rules, etc., to administer it accordingly. I don't see it is of any advantage either to factory owners or operatives to have uniformity in its administration throughout India. On the contrary an arrangement, which is advantageous in one part of the country, may be otherwise or cause inconvenience in another—for instance under section 5-B of the Factory Act no person is to be employed, with certain specified exceptions, in a factory on a Sunday. Under the present arrangement we close our factory on the weekly bazar day which is Monday instead of on Sunday, to enable the operatives to buy necessaries on that day. If a rule be made that on no account labourers should be employed on Sundays, factory owners will have to close their factories for the bazar in addition to Sundays, if the latter be not the bazar day, which means so much loss in weekly production. I don't see any need of strengthening the present inspecting staff by appointing full time medical inspectors of factories if my suggestion be adopted about empowering factory owners to employ children that apply in the absence of the medical officers without an age

certificate, pending the medical officer's next visit. When the number of factories is grown so large that the civil surgeon of the district is unable to inspect them at regular intervals without neglecting his other duties a full time medical inspector will be required. I believe most of the factory owners on this side have never neglected to carry out loyally instructions given by the civil surgeon from time to time. The proposed full-time medical inspector should be a subordinate of the civil surgeon, as the latter is the responsible officer of the district medical department, and should continue to have that responsibility in connection with the factories in his district. Rao Bahadur Trimbak Rao Sathe.

Witness was of opinion that the half-hour midday stoppage should not be compulsory in ginning, provided that extra women, as relievers, are engaged, so that no women works over 11 hours a day. Their gins always stopped at midday with the mill, but other gins did not stop. If there was a brisk market, owners of gins did not like losing the half hour. Night work was necessary in ginning, because some gins had more work to do than others. Whether a gin was busy or not depended a great deal upon the popularity and personal influence of the owner. If the ginning-owners formed a pool, then some gins were purposely kept closed. If all the gins worked by day, there would be no necessity for night work. In the Pulgaon mill the average outturn *per* hour *per* spindle was higher in the shorter days than in the longer days, being ·53 oz. in December as compared with ·43 in June. There was, of course, a larger gross output in the longer day. They spun coarse counts in April, May and June, and so the figures were not really comparable. The rainy months of July and August were best for spinning. From April until the middle of June the weather was too dry. The short cold weather days came between the two; they were not so good as the rainy days, and yet not so bad as the dry days. A fixed working day would not be suitable for that district, where all the workers would prefer the present daylight hours. If there was to be a 12 hours' day, then it must mean 12 hours of actual work, exclusive of the half-hour stoppage. Their mill did not need or want electric light, but if the working day were fixed, they would have to introduce it; otherwise they would lose in the cold weather. In the near feature witness could not see any grounds for anticipating improved application and outturn with a shorter day. In his experience there had been some improvement in skill. He thought that the production of 310 days with a fixed 12-hour day would be greater than that of 310 days with the present day of varying length. On the other hand, mills would have to bear the cost of an electric light installation. He was sure that the share-holders would insist on this being put in, in order to get the benefit of the extra time in the cold weather, if the Commission recommended a 12-hour day, as the operatives would prefer to work longer at the close of the day, even with electric light, rather than in the early morning. Mills should start at sunrise, and then use the electric light towards the close of the cold-weather days only. *Oral evidence.*

Witness No. 244.

Mr. Narayan Vithal Tamhankar, Manager of the Pulgaon Spinning, Weaving and Manufacturing Company's Mill, Pulgaon. Mr. Narayan Vithal Tamhankar.

Witness stated that he had fourteen years' experience of the cotton industry; he had been connected with the Pulgaon mill all that time. They worked daylight hours and had always given the midday interval from 11-30 to 12 noon. During the intervals the operatives usually rested; some took food then, and it was customary also to take a light meal at 9 A.M. and again at 3 P. M. On the longest working day the engine ran for 13 hours 5 minutes, and on the shortest day for 10 hours and 45 minutes, giving an average day of eleven and a half hours. With a fixed twelve hours they would have to put in the electric light. In the long run, their production would increase working a 12 hour day. Witness thought that in the evenings of the long days the younger adults neglected their work owing to the heat. There was a scarcity of child labour and skilled labour; if another mill were started in Pulgaon, the labour supply would be improved, as the inducement to skilled labourers to come to Pulgaon would be greater. Very few local men were employed in the mill. The hands consisted chiefly of *mahars* from the Nagpur district, and were constantly changing. The half-timers, on reaching adult age, preferred to leave mill employment rather than work on the ring frames. On an average the same labourer did not remain in the mill for more than five or six years. The system of *dasturi* was not prevalent in Pulgaon. The half-timers did their seven hours consecutively, but two intervals of half an hour each were given from 9 to 9-30 A.M. and from 3 to 3-30 P M., according to the Act. In the absence of the half-timers the full timers had to make the best arrangements they could for the doffing, and work was carried on somehow, perhaps at a loss. All the half-timers received the half hour interval. Monday was the holiday in Pulgaon, but if there had been a festival during the week they worked on Monday, closing at 4 P M. to permit of the operatives attending the bazaar. Cleaning work was done during working hours every other Sunday. The men had once struck for higher wages, and the proprietors had to give way. No children were employed before being passed by the civil surgeon, who came to the mill every three months, and so at times they had to wait a considerable period, and were inconvenienced thereby. Formerly they sent the boys to Wardha and there was no difficulty, but now all sorts of details had to be filled in in the certificate, which necessitated some one going with the boys and this could not always be arranged. Witness thought that the children might be provisionally passed by the hospital assistant and then be produced before the civil surgeon when he next visited the mill. The hours of the "young persons" class would determine the working hours of the mill. It would be impossible to run the mill without the aid of half-timers and young persons. Witness thought that the operatives would like two separate half-hour intervals, instead of the one midday half-hour's rest, but this would not prevent their going out as they liked. The mill on one occasion tried a pass-out system, and the men struck. The best months for spinning were July, August and September, and the worst months April and May. Witness thought that the production *per* hour *per* spindle in the long and short days was about the same, but he had no reliable data to work upon, for in July they spun high counts and in April low counts. They were inspected at present by the special inspector, the civil surgeon and the Deputy Commissioner. They ginned all their own cotton, and the gins worked according to the hours of the mill. There was no electric light in the gins, non-working children were not allowed in the mill. They were at present discussing the advisability of installing an oil engine for the weaving department, in order to run it independently of the spinning. They had 18,000 spindles and 179 looms; the operatives were 665 adult males, 170 females, and 25 half-timers. *Oral evidence.*

Note.—The witness was not asked to submit written evidence.

WARDHA.

Witness No. 245.

Mr. P. Hemingway, I.C.S., Deputy Commissioner, Wardha.

Mr. P. Hemingway.
Written evidence.

So far as I can judge, the physique of workers has not been affected by long hours. In general appearance mill workers] compare very favourably with field labourers. Regular work and regular pay afford small luxuries which field labourers lack. There is no necessity to limit the working hours of adult males. The mill hand will never overwork himself in this country; if the machinery runs for long hours, he will absent himself for longer intervals during the hours of work. I can see no physical deterioration sufficient to warrant the creation of a "young person" class. If the definition, moreover, of a "young person" depended on stated limits of age, the classification would be useless. I consider a register of all workers under the age of 16 advisable; for I consider that the ability of juveniles to work full time should be judged entirely by physical fitness, and not by age. Employment of women at night need not be prohibited. But if it is allowed, I would strictly enforce shifts, with short working hours and frequent intervals. It is unnecessary to raise the minimum age of children beyond 9. I would abolish the actual age limit entirely, and forbid employment of children "who have not attained puberty," unless they hold a certificate of physical fitness to work either as half or full-timers. As noted above, I consider physical fitness to be the only true criterion. If age is still retained, physical fitness should certainly be added to the certificates. I would class half and full timers according to physical fitness entirely. The provision of elementary education should not be obligatory. It would be an unnecessary expense in the smaller factories. If attendance at schools were compulsory under the law, this obligation might be included. A rule excluding non-working young children from factories is unnecessary, and would, I think, be vexatious. Inspections must be made by rule, but the definition of "dangerous" would rest with the inspector. Accidents to non-working children are exceedingly rare. But such a rule might be enforced very rigidly by a "conscientious" inspector, and entail great annoyance both to the mill owners and the factory hands. I would not prescribe any standard of latrine accommodation at all. The percentage requirements in factories employing 500 and 50 hands respectively vary enormously; in the big mill one latrine for every 50 persons might suffice, while in a small factory one for every 10 would probably be sufficient. It would suffice to make the accommodation "adequate in the opinion of the inspector." I would insist on separate urinal accommodation. All doors should be made to open outwards, in case of fire. Luckily fires are rare. No further precautions as to fencing of machinery are necessary. Section 12 (*c*) of the present Act is sufficient. Uniformity in the administration of the Act throughout India is advisable, though not an absolute necessity. In Bombay, for example, it may be advisable to restrict working hours more rigidly than need be done here, where labour is more easily obtained. Full-time medical inspectors should certainly be appointed. Proper factory inspection is really the work of a specialist.

Oral evidence.

Witness stated that he had had seventeen months' experience of factory inspection work, as Deputy Commissioner. His written evidence applied solely to the mills and gins in Wardha district. He had no experience of places where long hours were worked, but he was opposed to any more strict regulation of the hours of adult males in the Wardha district. If the gins in that district wished to work over eleven or twelve hours a day they had to apply for permission, and he then considered the system of shifts which they suggested. The gins could not arrange for separate working shifts with fixed hours, but they employed extra women on the simultaneous shifts system. If the gins did not ask for permission to work late, then it would be possible to prosecute them for working females beyond the legal number of hours. Witness had never known the gins to work after 9 P.M. Beyond the assurance of the ginning owners, he had really no guarantee that the women did not in fact work more than eleven hours. The practice of making ginning owners apply for leave to work late hours could of course be carried too far. They were not compelled to get leave in advance. There was no proper lighting in the gins and those that worked up to 9 P.M. did so by the aid of small lamps. Labour was recruited locally, and in his opinion the ginning hands compared favourably in health with persons in outside employments. They were more highly paid than coolies, and the scarcity of hands for ginning labour was not due to any drawbacks in the work itself. Labour generally was scarce. Witness had seen youthful full-timers hardly fit to do a day's work and he therefore approved of the second examination for physical fitness. The first examination should be final as regards age. The Act should apply to all gins, irrespective of the number of workers and the number of days worked. Witness once had complaints from Hinganghat that the mills had a difficulty in getting their boys passed, and he thought of allowing the local hospital assistant to pass them temporarily. The necessity for this step did not eventually arise. He did not think there was any cause for complaint on the part of the Pulgaon mill, as the doctor went there much more frequently than once in three months. At present the factories were inspected by himself, the civil surgeon, and the special inspector, but all three did not do the same work. Men on the spot were absolutely necessary as inspecting officers in order to pay surprise visits. The local resident officials should see that the orders of the factory inspector were carried out. There would be enough work for a full-time medical inspector in the division, but he would not be able to pass all the children. The civil surgeon would still have to do that work, and the medical inspector could scrutinise the certifying during his visits to the mill. Witness would like to see the full-time special inspector a medical man, who could attend to questions of physique, sanitation, and so on. The special factory inpector should be a senior man with a practical knowledge of factories, gained in Bombay or Calcutta. There had been one or two prosecutions for illegal employment of children, but owing to the fact that the offences, on examination, proved to be entirely technical, involving no blame on the mill owners, he withdrew the cases. If children were allowed to work for a week before certification this might be abused in small gins. It would lead to the illegal employment of children, and evasion of the law would be easy. He did not think that

the scarcity of labour led to mills running long hours and paying high wages in order to attract men. If the labour supply was not sufficient to meet the demand, then the men were independent. Generally speaking, there had been an increase in material prosperity ; the workers were masters of the situation ; and the mill-owners were really more in need of protection than the workers. Witness would favour a 12 to 12 day, with intervals at 6 o'clock for gins, working the whole 24 hours. This would prevent the all night period from being worked systematically by one shift. Mr. P. Hemingway.

WITNESS No. 246.

Lieutenant-Colonel H. E. Banatvala, I.M.S., Civil Surgeon, Nimar, Central Provinces. Lieutenant-Colonel H. E. Banatvala. *Written evidence.*

I do not think the physique of workers has been affected by long hours, but I consider it necessary to limit the working hours of adult males. As regards the former statement, I would add that this being a district with seasonal factories for ginning and pressing cotton only, my remark applies to the engine-room staff and the *kamals* who bale the ginned cotton. As such men do not return year after year to the same factory for work, the statement regarding their health is of little value. It is very necessary to limit their working hours, as I know of several ginning factories and presses which work up to 16 hours a day without a shift, owing their immunity from prosecution to the fact that during the previous season they have worked for less than 120 days, which removes them from the operation of the Factory Act. A maximum of 12 hours should be prescribed for adults, the rule laying down —

(1) that, except when working by shifts, the legal working hours should be from 6 A.M. to 6-30 P.M. ;

(2) that the engine should be stopped for half an hour between noon and 2 P.M. ;

(3) that in factories working on the day-shift system no adult male should remain on the factory premises for more than 12 hours.

The last rule may require an explanation. In my experience, which, however, is confined to seasonal factories only, adult labour is sweated under the cloak of the day-shift system, and I consider the addition of the words " remain on the factory premises " necessary. The employment of women at night should be prohibited. The minimum age for children should be raised to 16. Certificates of age and physical fitness should be required for persons between the ages of 16 and 18 years. I think it necessary to prescribe an analytical standard of purity for air in factories with a view to secure proper ventilation. The seasonal factories are bad offenders in this respect, and the air in them is thickly laden with cotton fibres and dust. A standard of moisture for the air in factories should also be prescribed. A standard of purity should be fixed for the water used for humidifying purposes. I do not think it necessary to raise the standard of latrine accommodation to one seat for every 25 workers, nor do I think that the separate urinal accommodation should be insisted on. All doors of working rooms should be hung so as to open readily from the inside outwards in case of fire. Full-time medical inspectors should be appointed to deal with questions relating to the health, age and physical fitness of employees, and the ventilation and sanitation of buildings. I cannot produce any statistics showing the relative healthiness of factory operatives, as compared with the general average of the non-factory population of the same class. I believe, however, that employees over 50 years of age are less healthy than other men of the same age and class. The factory population is, in my opinion, of the same physique as the general population of the same class : but the operatives suffer more from diseases of the respiratory system. I regret I cannot supply any statistics in support of this statement.

I do not think the dentition test can be absolutely relied on in India for the determination of age. No hard-and-fast rule can be laid down, but the usual factors will have to be considered in each case, *viz.*, the teeth, height and weight, growth of hair on pubes and armpits, development of the breasts in girls, and the general appearance. The average age at which the permanent teeth appear in Indian children is :—

(*a*) Central incisors	...	8 years.
(*b*) Lateral „	...	9 „
(*c*) Canines	...	12 „
(*d*) Anterior bicuspids	...	10 „
(*e*) Posterior „	...	12 „
(*f*) Anterior molars	...	7 „
(*g*) Second „	...	13 „
(*h*) Posetrior „	very uncertain ; any age from 20 upwards.	

I am positive from experience based upon actual knowledge of specific cases that the existing law as to the employment of children in factories is evaded by employing as adults children under fourteen. I regret I cannot give any statistical basis for my opinion. I am in favour of the appointment of whole-time medical inspectors who should form a branch of the Indian Medical Service like the Jail Department. Their pay should be the same as for officers of the Jail Department of the same grade, *plus* Rs. 200 a month in lieu of house rent, private practice, and to compensate them for the constant travelling which their appointment would involve. I consider one seat for every 35 persons or fraction thereof ample latrine accommodation. I consider that every factory which employs steam as its motive power should be under the Factory Act, irrespective of the number of days it works during the year, or the number of its employees. Seasonal factories try to escape registration under the Act in various ways, as by doing so they are able to sweat female labour without being prosecuted. I have noticed several instances of this in my district, one as late as December last. Registers are fudged, and even duplicate registers have been known to be kept, one for the inspector containing false entries, and the other for their own use showing correct entries.

Lieutenant-Colonel H. E. Banatwala. *Oral evidence.*

Witness stated that he had had twelve years' experience of factory inspection work in the Khandwa district. There were only gins there, and half of them were not under the Act. All gins ought to be brought under the Act. If a gin had not worked the full number of days in one season, then at the beginning of the next the owner applied to have it taken off the register, which had to be done. A new gin did not come under the Act for the first year, it lay with the local authorities to apply the Act to it. Those gins that did not come under the Act took advantage of it, and worked their females beyond the legal number of hours. On one occasion he entered a gin, not under the Act, and found that it had been steadily working with one shift from 4 A.M. to 8 P.M. No doubt extra women had been employed, but they had to be there for sixteen hours. Among the "extra hands" they usually included all the sweepers and mukaddams. If a gin wished to work for 16 hours, it should do so by two eight-hour periods, even if the hands would in consequence have to be content with less wages. He had initiated prosecutions for working women beyond the legal hours, for the defective fencing of machinery, and for lack of proper sanitation. There had been no special accidents in the district, and no one had been killed in front of the openers. While he had not observed any injury to the health of the labourers by reason of their having to breathe the fluff and dust laden air for so many hours yet there was bound to be some injury from this cause, and so he favoured a restriction of hours. A standard of purity of air in gins should be fixed, and the dust and fluff nuisance should be remedied by the introduction of fans or humidifiers. He had not seen any gins with fans therein. The operatives must, he thought, be troubled by the dust, otherwise they would not tie up their mouths and noses. His impression was that the atmosphere was so bad that it was bound to tell, and did tell, on their health. The workers went to the gins for about six months in the year. Many of the workers were over 50 years of age, but he did not regard the gins as a refuge for weaklings. The men who worked in the gins were not cultivators. The question of employing men or women at night was purely one of money; men could be obtained if the owners cared to pay enough. Gins had to apply for permission to work late under clause 6 (1) of the Factory Act. He was convinced that children did work in gins, and while about to make an inspection he had seen children running out of the ginning room. It was difficult, however, to catch them actually at work. All non-working children should be prohibited from entering the factory gates, and any child found within the gates should be presumed to be at work. No persons under 16 years of age should be allowed to work in gins, as the atmosphere was prejudicial to children and stunted their growth. During twelve years he had only passed one half-timer; half-timers as such were not employed in gins. Witness disapproved of the "simultaneous shift system" under which the women were in fact retained at work during the nominal intervals of rest. The longest hours that he knew to be worked by one shift were 16½. He believed that the *hamals* did get an interval of rest. He approved of the appointment of medical officers for special inspection work. At present he considered himself responsible for sanitation, ventilation, and the certifying of children; he left the fencing of machinery, and boilers to the factory inspectors. Witness based all his replies on his experience of the ginning industry only.

Witness No. 247.

Mr. James Doyle. *Written evidence.*

Mr. James Doyle, Officiating Civil Surgeon, Wardha.

The factories in this district are cotton weaving, spinning, ginning, and pressing factories I cannot supply any statistics showing the relative healthiness of the operatives as compared with the general average of the non-factory population of the same class. I have not enough experience in factories to give any definite opinion on this subject. From my short experience with factories I am inclined to think that the factory population is above the general average of the same class as regards physique. I do not think the operatives in this district suffer more than the general population of the same class from any specific classes of diseases, but I cannot give statistics regarding this. As regards definite limiting ages being prescribed for certain classes of factory workers, I am of opinion that the physical fitness of the children is of more importance. Children should be certified fit for the work to be done—*e.g.*, one boy of 9 might be fit to work six hours, but another, of the same age, might not be fit to do more than three hours' work. The medical declaration of "fitness" should be based on the number of hours exacted from the operatives. Dentition by itself cannot in all cases be relied on in India. In my opinion the average age at which the permanent teeth appear in Indian children is as follows:—

(*a*)	Central incisors	7th year.
(*b*)	Lateral „	8th to 9th year.
(*c*)	Canines	10th to 13th year.
(*d*)	Anterior bicuspids	9th to 10th „
(*e*)	Posterior „	10th to 14th „
(*f*)	Anterior molars	6th to 7th „
(*g*)	Second „	11th to 14th „
(*h*)	Posterior „	16th to 24th „

A child of 9—12 permanent teeth.

„ of 13 to 14—28 permanent teeth.

With 28 permanent teeth in a girl or boy of this country, I would class them as over 12 years of age—though I know of an authenticated case of a girl whose age was 10 years and one month, and who had 28 permanent teeth. The father, being an educated man and in Government service, had a record of his daughter's birth. I have no experience of any cases where the law is evaded as to the employment of children in factories, either as half or whole-timers. With respect to districts like this, I am not in favour of the appointment of whole-time medical

inspectors. The civil surgeon of the district is sufficient. Where there is a dispensary, the hospital assistant might be authorised to look round occasionally and bring any irregularity to the notice of the civil surgeon. The standard suggested by the Textile Factory Labour Committee for latrine accommodation—one seat for every 25 persons—is sufficient. There ought to be separate urinal accommodation. One thing I would like to bring to the notice of the Commission is that all factories—irrespective of the number of hands employed, and the number of months they work—should come under the Factory Act on opening for the first time. The working hours of adult males should be limited. I know of no cases in which physique has been affected by long hours. The employment of women at night should be prohibited. The minimum age at which children are allowed to work in factories should be raised to 10 years. Certificates of both age and fitness should be required before allowing children to work in factories. Similarly, before children who have hitherto worked half-time are allowed to work full time as adults, certificates should be required of both age and physical fitness. A rule should be made prohibiting young children from accompanying workers to dangerous and unhealthy parts of factories. The best way to enforce this prohibition would be by law, *i.e*, no children who are not authorized workers should be allowed on the premises of the factories, and on any breach of this rule the proprietor or manager should be prosecuted and heavily fined. There ought to be a standard of ventilation. All doors should open from the inside outwards, as in case of fire escape would be easier. I am of opinion that the Factory Act should be uniform throughout India. **Mr. James Doyle.**

Oral evidence.

Witness stated that he had had one season's experience of inspection work in the ginning industry and he had inspected the mills in the district since August. He considered that the cotton operatives and ginning labourers were as good in physique as persons in outside employments. He had not found them subject to phthisis. Mill hands did not come to the hospital in larger numbers than outside workers. There were occasional cases of long ailments, but he could not follow the history of these cases. At present the certificates for age were granted solely on dentition; he considered that physical development, taken in conjunction with dentition, would give more accurate results. He knew children passed as nine years who were not fit to do two hours' work a day; if the minimum age were not raised, then the civil surgeon should have power to reject all physically unfit children. Witness had examined children for the Pulgaon mill much more frequently than once in three months. If they had several children waiting, then he went to the mill; but if there were only one or two children, then the mill had to wait until his next visit to Pulgaon or Hinganghat. He thought it would be advisable to allow the hospital assistant to pass the children provisionally. All gins should be brought under the Factory Act. His duties would not be increased thereby, because many of the gins that escaped the Factory Act had to be inspected under the Municipal Act. He disapproved of women working in gins after 8 or 9 P.M. A restriction of the hours of adult males was not necessary in the Wardha district; but, as a question of principle, he thought 12 hours a reasonable working day in India. He should expect labourers to work reasonably hard during the whole of a 12 hours day. They did not work the whole of the 13-hour hot weather day.

Witness No. 248.

Mr. Ramrakhdas Ramdayal, manager of the Seth Narsingdas Molita Press and Ginning Factory, Wardha. **Mr. Ramrakhdas Ramdayal.**

Combined written and oral evidence.

Witness stated that there were sixty gins in the factory. Tkey employed 75 men and 91 women in the ginning, and 62 men in the press. The ginning went on from the middle of November to the end of March, and the usual daily hours for both ginning and pressing were from 6 A.M. to 6 P.M. The labourers in the gins received one and a half hour's interval, and those in the press half an hour's interval. He approved of the Act being made applicable to all gins; and he was in favour of women being allowed to work at nights. He had no objection to fencing the shafting between the drums so as to lessen the chance of accidents. Women should certainly be prohibited from working in front of the opener, but unless the opener itself was improved there would always be accidents from fire, and from stones hurled out. During the last five years there had only been one accident in their factory—a man got his fingers crushed in the machinery. There were occasional fires from the opener, but no one had ever been killed. They did not work their gins for 24 hours, because they could not employ women at night. They were prevented from doing so under the present Act, and men were not available to do the work. There was consequently considerable delay in ginning the cotton, and they suffered inconvenience by not being allowed to work women at night. All castes worked in the gins, and there was no scarcity of hands. Women earned three annas and men six annas a day The cultivators did not work in the gins; they were a superior class, and their wives would not look at employment in a factory. Those who worked in gins obtained employment at other times in carrying wood and grass and on general coolie work. He approved of all factories being brought under the Act, because they gained great benefit from the advice of the factory inspector. The accidents were also fewer. There was a pool for ginning in Wardha, the rate being Rs. 4-8 for 345 lbs. of cotton. When there was no combination the price was only Rs. 3-8. There was no combination this year among the presses, and so last year's price of Rs. 3-8 a bale had decreased to Rs. 2·4.

HINGANGHAT.

WITNESS No. 249.

Mr. N. R. Dastur, Hinganghat.

Mr. N. R. Dastur. *Written evidence.*

The name of the mill is the Rai Saheb Reckchand Mohota Spinning and Weaving Mill, the owner being Rai Saheb Reckchand Mohota. The average number of workmen is 915, consisting of 640 men, 166 women, 100 boys and 9 girls. The mill was started in the year 1900, and the average working days are 310 *per* year, the average working time *per* day is 12 hours 3 minutes throughout the year. Our mill always works from sunrise to dark; and as we have no electric light at all, the longest time of working has been registered at 13 hours and 24 minutes, and the shortest at 10 hours and 58 minutes. The average comes to over 12½ hours a day for 5 months from April to August, while it comes under 12½ hours for the remaining 7 months from September to March. My opinion is that the working hours of adult males should not be limited by law, because the physique of the workers has not been effected by long hours; but if the working hours are to be limited, I would stop the working of the mills by electric light, and let all the mills work from sunrise to sunset, with an interval of half an hour for rest between 12 and 2 P. M., so the daily average of working hours would then come to 12, and all would get an equal advantage by this system, and no mill-owner would be able to work more owing to the absence of the electric light. I append a table showing the effect on production of days of varying length:—

Average working day of	Production *per* spindle *per* hour of 16's (ring spindles).	Production of reeling yarn *per* spindle *per* hour of 20's (ring spindles).	Percentage of waste.	Period covered by these statistics.
Hours.	Oz	Oz.	Lb.	Seven months September to March, five months April to August
12	1·36	·55	4·44	
13	1·35	·54	4·86	

Certificates of physical fitness as well as of age should be required before children are employed on half-time, as no children should be allowed to work without such certificates. I do not think it is necessary to call for fresh certificates of physical fitness in the case of half-timers who become adults on attaining the age of 14, according to their original certificates. I am not in favour of the suggestion for the creation of a class of "young persons," as in the United Kingdom, because if that system be introduced in India, it will create great confusion. The number of "young persons" of the age of 14 -16, working in our mill, is nearly 100. As I have said above, I am quite against any limitation by law of the working hours of adult males, and if the day be fixed 12 hours by law the result would be less production, as the work-people have the usual habit of taking time for smoking, eating, &c., in the mill premises, and thus their actual working time comes down from 13 to about 11½ hours But at the same time I am not of opinion that they should be allowed to work for more than 12½ hours. I would stop the electric lights altogether, and allow the mills to work from sunrise to dark in all the seasons of the year, so that there will be no need to fix any definite time for the adult males. The special circumstances of the mill industry in India are such as to demand full consideration of local circumstances, customs, climatic conditions, &c. The working day of 13 hours is only normal; moreover, there is a vast differece between the working of the Indian and Lancashire operatives. The Indian operative cannot work regularly, or for any fixed period of time; he can go on leave and return when he likes, and for these reasons I dislike legislative interference with adult labour. I do not approve of the suggestion that factory inspectors should be obtained from the United Kingdom, where the system is quite different from India. I consider it essential that any law which it may eventually be decided to introduce should contain provisions introducing a certain amount of elasticity in its actual operation. As regards the housing of the mill hands, it would be better if every mill owner of a thickly populated city like Bombay provided accommodation for their work-people to live in the vicinity of their mills, as the health of the employees suffers considerably owing to their most unhealthy surroundings in the city. The Rai Saheb Reckchand Mahota Mill Ginning Factory and Cotton Press employs 44 men and 58 women in the ginning factory on 35 gins, and 35 men and 3 women are employed in the press. The ginning commences from the middle of November and extends up to April or May, depending upon the crop. The gins work from sunrise to sunset, and the press one or two times in a week, when there is a stock of cotton ready to be pressed. The average number of hours a person employed in ginning or pressing works is about 12, while the working time of women comes less than 11 hours, as extra women are employed to relieve each other in order to give them intervals of one and half hour's rest. I am of opinion that the Factory Act should not be applied to gins and presses. The employment of women at night should be prohibited in spinning and weaving mills, but not in gins, because the workers in ginning factories are quite different in all conditions to those in spinning and weaving mills. If it is decided to make the Factory Act applicable to all ginning mills and presses, some special provisions in the Factory Act would be necessary regarding the working of the women. They should be allowed to work overtime without any restrictions, because all the ginning mills are worked by the women only, and the labour should not be interfered with. It would be better if the ginning line shaft were cased up in order to avoid accidents. There was only one accident in the cotton press during the last five years, and none in the ginning factory.

Mr. N. R. Dastur. *Oral evidence.*

Witness stated that he was for ten years at the Badnera mill; he had been manager of the Hinganghat mill for two years. In his experience he had seen no improvement in the skill of the workers, though there had been a slight improvement in their application to work. Their mill worked by daylight, and the longest day was 13 hours 25 minutes. He approved of an hour's stoppage at midday in the hot weather. He preferred the daylight to dusk system of working; but if uniformity was desired then a fixed twelve hours day would be advisable. With a fixed twelve hours day the production in 310 days would be greater than the present production *per* year. At present their average day was 12 hours and 3 minutes. The hands would like a fixed time for starting and finishing work. An electric light installation would cost about Rs. 10,000. The waste was always higher in the long thirteen-hour hot weather days than it was in the shorter days, so a fixed 12-hour day would be beneficial in that respect. The weekly holiday was Monday, and the hands were never called to work on that day. All cleaning was done fortnightly on working days. He had tried to introduce the pass-out system without success; meals were taken irregularly, at no defined hour. The midday interval was from 12 to 12-30 P.M. The half-timers and women also had recesses from 9 to 9-30 A. M. and from 3 to 3-30 P. M. The half-timers all went out during their recess and in their absence the adults had to do the doffing work the best way they could. There was a scarcity of women and half-timers. In order to encourage throstle boys and half-timers to attend regularly, they offered a bonus of four annas and two annas respectively, for a full week's attendance; out of 300 boys the bonus was earned by 220. The absenteeism throughout the mill amounted to seven *per cent. per* day. All the hands resided close by, and did not take a long holiday each year. The locally grown cotton was very good, and they spun up to 40's, with an average of 18's. The *swadeshi* movement had helped them, and there had been an increased demand for Indian made cloth. They sold their cloth in the Central Provinces and in Calcutta. They had electric light in the gins, and could always get plenty of women for that work, which appeared to be popular. Only adults are employed for ginning, and extra women are always employed so as to admit of the workers having intervals of rest.

Witness No. 250.

Mr. W. R. Thornley, Hinganghat.

Mr. W. R. Thornley. *Written evidence.*

I am manager of the Seth Bunsilall Abirchand Rai Bahadur Spinning and Weaving Mill, Hinganghat, which employs 781 men, 216 women and 168 children. During the last four years the factory has worked for over 12½ hours a day as follows:—In 1904, 133 days; in 1905, 138 days, in 1906, 121 days and in 1907, 116 days. The average daily running hours for each year are as follows:—in 1904, 12 hours 1 minute; in 1905, 12 hours 2 minutes in 1906, 11 hours 49 minutes; and in 1907, 11 hours 52 minutes. The ginning factory worked in connection with the mill employs 47 men and 62 women. The season is from November 10th to May 15th and the working hours from sunrise to sunset. The average number of hours worked is 11½ with an interval of ½ hour at noon. Each woman is relieved once in the morning and once in the afternoon by spare women kept for the purpose. The gins are under the Act. I do not approve of the prohibition of nightwork for women, because it is very difficult to get male labour now, and should women be prohibited from working at night it would be very hard in some seasons to finish ginning before the monsoon. I see no objection to line shafts in ginning factories being cased in. We have only had one slight accident in the ginning factory during the last five years. I see no reason why the working hours of adult males should be limited, the present working hours in my opinion having no material effect upon the health of the mill hands. I don't think it is advisable to create an intermediate or young persons, class. I am of opinion that women should be prohibited from working at night except in ginning factories. The present age-limit for children is suitable. Certificates of physical fitness as well as of age should however be required, but not for half-timers about to work as adults, if the first certificate determines the age and includes physical fitness. Definite sets for children should not be prescribed; this should be left to the option of the mill managers. Owners should not be required to educate their half-timers. Non-working children should be kept out of the dangerous parts of factories as much as possible, and managers should try and carry this out, but without a rule to force them. I think an attempt should be made to fix a standard of purity for air, and a standard of moisture. If possible a standard of purity for humidifying water should also be prescribed. The present latrine standard is sufficient, but urinal accommodation should be provided separately. All doors should be so hung as to open readily in case of fire. I do not think that further precautions for fencing machinery are required. The administration of the Act should, as far as possible, be uniform throughout India. I don't see any necessity for the appointment of full-time medical inspector of factories. I have been in the country 13 years, 11½ having been spent in Hinganghat. During this period the wages of card room hands have risen 15 to 20 per cent. and those of ring frames piecers about 35 per cent. in addition to a weekly bonus should any individual not absent himself during the week. On the whole we have very little sickness amongst the hands, and to me they seem in very good health. We do not run by artificial light; but only from daylight to dark with an interval of ½ hour at noon. The hands take their food during the running time, and in several instances some have been timed and found to have taken 45 minutes. They smoke, and also wash their cloths in the mill compound while the mill is running. I do not see any necessity to legislate for a restriction of hours, believing as I do that labour is well able to look after itself. As regards the half-time system, I see no reason why the present Act should not be sufficient, if it is adhered to. In my opinion any additional appointment in the shape of whole time inspectors is not needed.

NOTE.—The witness could not attend for oral examination.

NAGPUR.

WITNESS No. 251.

Mr. J. Walker, I.C.S, C.I.E, Commissioner of the Nagpur Division, representing the Government of the Central Provinces.

Mr. J. Walker. ***Written evidence.***

The special factory establishment for the Central Provinces consisted, until about a year ago, of a share of the services of the Presidency Inspector of Factories, Bombay. There are now two special officers for the Central Provinces and Berar, on pay of Rs. 400—20—600 and of Rs. 300—20—400. That establishment is linked with the administrative machinery of Government, and is supervised by officers not forming part of it in the manner described in book circular IV-D. 6 of the compilation of Chief Commissioner's book circulars, and in the rule published in notification No. 3252, dated the 21st March 1906. I am not aware how the present special inspectors have been recruited or trained. Inspection by the special inspector of factories, Bombay, was satisfactory, but could not be sufficiently frequent. I have not seen enough of the working of the new staff to express an opinion on their work. But I am inclined to doubt whether the emoluments of the post are enough to obtain a sufficiently highly qualified type of officer, at least for the post of chief inspector. That officer should be a thoroughly competent man of the type of the English factory inspectors. I am inclined to think that a chief inspector with one assistant is probably enough, but possibly further experience of the work of boiler inspection, which has only been recently introduced in the Central Provinces, may show the need of another assistant. It is convenient that boiler inspection should be combined with factory inspection to save multiplicity of staff, in view of the short working season of the great majority of factories. The chief inspector should be a thoroughly competent man with a special knowledge of the supervision of textile industries. He might be paid from Rs. 500 to Rs. 1,000, or perhaps on the scale of Public Works Department officers. He will be able to standardize the work of his assistant or assistants, and by his and their inspections to give District Magistrates and Civil Surgeons useful guidance as to the technical points particularly requiring attention at their inspections. I do not think it is at all necessary to have very frequent inspections of the seasonal cotton factories by the special staff. If they record in an inspection book kept at such factories the defects to be attended to, Civil Surgeon and District Magistrate can enforce compliance. A set of questions to be answered at the inspections of different classes of factories might be drawn up. I am not in favour of the suggestion that factory administration throughout India should be centralised under the direct control of the Commerce and Industry Department. The suggestion seems to have occurred to the Textile Factories Labour Committee from a consideration of the local extent of the Factories Act, as defined in section 1, *vide* page 25 of their report, but such a consideration has, of course, no force as a reference to other Acts which have a like local extent of the whole of British India shows. Direct control by the Imperial Government would tend to weaken local authority, and to effect uniformity without regard to local conditions; and the latter are as important in factory inspection work as in most other branches of the administration. Under the existing Act the Imperial Government possesses very full control over the Local Government's factory administration, including the power to make rules [section 18 (1)]. To advise the Government of India in the exercise of this control, and also to advise, but not to direct, Local Governments in their factory policy, I am inclined to think that the creation of an advisory post to be styled perhaps "Inspector General of Factories" might be a good thing, on the analogy of what has been already done in education, agriculture and excise I do not think that whole-time medical inspectors of factories are required for these provinces. The general sanitation of factories can be, and, I believe, is adequately supervised by the periodical inspections of the Civil Surgeon of the district, and I think it is undesirable to dissociate the latter from direct responsibility for the sanitary state of the factories in his district. Further more, I think that sanitation, and the age and fitness of children can well be checked by practical men of sound common sense, having some knowledge of sanitation, and great experience of the appearance of the Indian factory child worker. Our special factory inspectors should possess such qualities and knowledge, and their number can be increased, if necessary. But I would have no other medical inspector of factories than the Civil Surgeon of the district. I am not aware that the physique of working males has been affected by long hours. But I think it is clear that a legal limit should be imposed for the working hours even of adult males. There must be a natural limit of working time beyond which the health of the average worker must suffer, and when the average worker does not know his own interests best, the law should interfere to some extent with his liberty to overwork himself. The effects of overwork may be counteracted to some extent by irregularity of working, but they must tell in the long run, and with the growing scarcity of labour the supply should be conserved. Trade competition must necessarily prevent even the best managed mills from working for much shorter hours than the average adopted by the trade, and the latter naturally seek to make the most that they can out of the existing labour supply without considering the rather remote consequence of the gradual deterioration of that supply which must ultimately follow any continuous overstrain on employees. It is possible too that the supply of labour in mills would be greater if the standard daily task were less arduous. I think that a limit of 12 hours at the mill, that is 11½ working hours and ½ hour's interval, might be fixed as a maximum. I am not prepared to express a definite opinion whether particular hours, and if so what, should be prescribed by rule, without discussion of the matter with some gentlemen actually engaged in the industry. I am inclined to think that it should be permissible to start the 12 hours day (allowing ½ hour for stoppage of the engine) at a fairly late hour in the morning. An early morning start to work is hardly in accordance with the habits of the people, and experience in respect of clerical labour does not show that it is conducive to a very good day's work. I have not observed deterioration in young workers. But I think it is certain that this must occur as the usual working hours are rather too much even for seasoned adults. But I would not advocate the creation of an additional class based on age, owing to difficulty of all classification on that basis. Besides this the restriction of the working hours of adult males will lessen the necessity for such an intermediate class. I approve of the registration of all workers up to 16 years of age. I think that the employment of women at night is open

to so strong objection that it should be entirely prohibited, except for very special reasons and for a strictly limited period. Children must generally be left neglected, or taken to the factory, and the women's health must suffer in the long run as they have probably household work to do at home after the night's work in the factory. There is besides a good deal of likelihood that women may, as is not uncommon in the case of *punkha* coolies, attempt to work both in the day and in the night shift, for the sake of extra temporary gain. As far as I know it is only in ginning factories that all-night working by women is usual. The amount of capital required for such factories is not large, and it can be very well remunerated by working by day only. I think it is not uncommon in a town containing several ginning factories for one to be working by day and night shifts, and for others not to be working at all, but to be sharing in a pool of earnings. Such night-working is of course quite unjustifiable. To meet cases of genuine emergent pressure, as to the genuineness of which inspectors would have first to satisfy themselves, inspectors might, I think, be authorised to grant special permission for women to work at night for a period not exceeding one month in one year. The answer to the question whether the minimum age for children be raised depends upon what idea is accepted as the type of child development, representative of the minimum stage of development to be reached before a child can be considered to be fit to work as a half-timer in a factory Practically I think there is little difficulty in forming this idea, if a number of boys of different ages are collected together and scrutinized. In the period of growth of all children there is, I think, a more or less marked stage at which the young creature ceases to be a soft and infantile looking child, and becomes an active looking little boy or girl. That stage should, I think, be reached before a child is passed for factory labour. I have scrutinized the pupils of several boys' schools with this point in view and I am inclined to think that the stage in question is generally reached rather about the reputed age of 10 than that of 9. But I should wish to make some more extended examinations before finally recommending that the age be raised to 10. Even if it were the case that age could be accurately determined either from records of births or from physiological signs, I still do not think that age alone should be regarded as the sole determining factor in the decision whether any particular child should be allowed to be enrolled as a factory worker. In fact age is itself a minor point as compared with physical fitness, though on humanitarian grounds it is desirable to prohibit the employment of very precocious youngsters who might otherwise be fit enough. I certainly think that a certificate of fitness by a responsible officer should be required to be obtained by employers before registering and employing any child. If a Civil Surgeon considers that an uncertified child under the authorized age is employed, it is open at present to the employers to furnish evidence under section 16, and such evidence can no doubt be found, if wished, and cannot be ordinarily rebutted. Section 7 (1) should be amended so as to run— Mr. J. Walk

"No child should be employed in any factory unless he hold a certificate from an inspector certifying him as fit to work in a factory."

and the definition of child in section 2 should be amended as noted below. I may add that once the principle that fitness and not mere age, is the qualification for child factory labour is admitted, it would seem that power to disqualify on the ground of diminished fitness during the interval of technical "childhood" must be taken. A child may be fit at 10 but not at 11 or 12 years age. I am also inclined to think that the determination of fitness need not be entirely confined to certifying surgeons or persons practising medicine. I think it might be determined also by special inspectors whose common sense and experience should qualify them practically to do so. Their decision might be subject to revision by the certifying surgeon. I do not quite fully understand the Committee's recommendation on page 16 of the report, on which apparently question (*p*) is based. Once a child is certified as apparently above 10 years of age, and fit to work half-time, there must by mere efflux of time come a period when that child without further examination or certification must be permitted to work full-time. Taking the earliest age for certification to be about ten, it may be doubted whether that stage is practically always reached by the time the first certificate is four years old, but it may be safely assumed that it will be reached (if ever) by the time the first certificate is six years old. It seems to me therefore that the best course would be to extend the definition of the term "child" in section 2 up to the age of 16 years, but to add a proviso "that the term should not include a person who holds a certificate from the inspector of having attained the age of about 14 years and of being fit to work full-time." This will enable all fit to pass out as full-time workers on attaining 14 years of age. Without forming a separate class, their names may be kept on the children's register until, according to the original entries, they attain the age of 16 years, when they should be struck off, as also should be the names of those who have not so passed. We cannot interfere further with the latter feeble young men's method of earning their livelihood. It may be open to the inspector to cancel a certificate once granted on the ground of diminished physical fitness. I think that some system of regular sets for the employment of children should be obligatory. While education outside the factories is not compulsory, it is not likely that many children of labourers would go to school if there were no factory. But if young children work in factories, they practically incur a certainty of illiteracy. The cost to employers would not be much, and I think that they may be required to provide elementary education for the children they employ. The school hours would have to be light. A rule should be made prohibiting non-working young children from accompanying workers to dangerous or unhealthy parts of factories. The rule may be enforced under the provisions of section 17. The employers may be required by rule to affix notices, prohibiting the practice, in prominent places and near the dangerous parts, and to provide places with an attendant to look after the children where women may deposit their children, if they are required to work in dangerous or unhealthy parts. The proposals to fix standards of purity for air, and for humidifying water, and a standard of moisture, seem suitable for factories working the whole year. Much depends on the situation of the factory, but I am inclined to think that one latrine seat *per* 25 workers is an unnecessarily large provision, looking to the habits of the people. Probably one in 35 or even 40 is enough. Urinal accommodation might be required, if ordered by the Civil Surgeon. It should be prescribed that all doors of working rooms shall be hung so as to open readily from the inside outwards in case of fire. I think that the fencing of machinery is generally well seen to. All orders for any additional precautions should be recorded by the inspecting officer in a book

Mr. J. Walker.

kept in the factory, and compliance should be checked by the next inspecting officer. Besides the amendment in the law that will be necessary, if the suggestions made in the answers given are accepted, I would note the following points :—

Section 2.—The existing definition of "factory" involving a period of working is arbitrary and somewhat unworkable. The time element in the definition may well be eliminated. If a gin works only for a very short time it may escape actual inspection, but there is no reason why it should escape the liability to inspection

Section 3.—I think that Sub-Divisional Magistrates should also be *ex-officio* inspectors of factories, for all factories in their sub-division, if so ordered by the District Magistrate. This inspecting agency should be made use of under the control of the District Magistrate. As suggested above, a set of questions might be prepared for the use of inspecting officers.

Section 15.—This should certainly provide a general penalty for the breach of any rule framed under the Act, besides imposing a penalty for a breach of the law or rules by particular specified acts. There should be a sanction for all rules.

Oral evidence.

Witness stated that he had been an *ex-officio* inspector of factories during the greater part of his eighteen years' experience in the Provinces. He considered that factory workers as a class were physically up to the standard of those in outside employments; the children were rather spare, however, and if anything below the average physique of the school children. To a certain extent this was probably due to their hard work in the mills. There was a great scarcity of all kinds of labour. This did not apply specially to factories, and there was nothing to show that mill labour as such was unpopular. He approved of a fixed twelve hours' day, which would be more beneficial to all concerned than the present daylight to dusk day. He had not heard the workers complain about the length of the present day in the hot weather. With a fixed twelve hour day between the hours of 5-30 A.M. and 8-30 P.M., provision could if necessary be made for overtime work in special emergencies Witness did not agree with the view that the Indians were early risers and liked to start work early. He had seen a gin working from 5-30 A. M. to 10 P. M. without proper shifts, If the gins did in fact employ the proper number of extra hands, there was no harm in allowing the so-called simultaneous shift system in seasonal factories. He thought that the women themselves were particular about taking their proper intervals of rest. Even where the labour was supplied by a contractor, the owner of the gin must be held responsible for keeping a register of the workers, and for any defects in the system under which the labour is employed As a matter of fact that question had never arisen. He would not allow women to work in gins at night, in the ordinary course of things; they should only do so if there was a heavy cotton crop to handle. At present they found one gin working day and night, and an adjoining gin shut down, so that night work was not always necessary. All gins should come under the Act He approved of the definition of a factory adopted in the English Act; the number of persons employed was not a satisfactory criterion. There was an explosion in a Nagpur ice factory, not under the Act, resulting in the death of eleven persons. The cause of the accident was the breaking of an ether tube, which was not sufficiently guarded. Had the factory been liable to inspection, it was highly improbable that the defect would have escaped notice. There was no reason why the law relating to the employment of women in gins should be relaxed He would insist on the extra women being actually present, but it might be too much trouble to have their actual hours of work stated. He approved of limiting the time during which gins could work by night. Concerning deterioration of health, one would expect to find evidence of it, considering the matter on *a priori* grounds, but he had not done so. He had made no special enquiries on the subject. On humanitarian grounds he approved of raising the age for children to ten. Physical fitness should also be a condition of their employment. Witness thought that if they could fix the limit at which a man could work steadily throughout the year, then the labour supply would be improved. All this changing about among the mills indicated that the present working hours were too long, and that the men could not work them in comfort. He believed that shorter hours would make for efficiency. In his opinion the "young persons" class would give rise to complications His idea was that the adults required protection. Labourers here had not that intelligence and education customary in the West, and were tempted to overwork themselves, so much so that long holidays became periodically necessary By making the labouring population more comfortable, it would become more stable Witness considered that, with daylight working, the hot weather day was too long. No working day should exceed twelve hours. It was not humane or natural to employ all a man's daylight hours solely in work. No child should be allowed to work without first obtaining a certificate; in the districts they might give the hospital assistant power to pass children provisionally. There was no gain in having the factory inspector the boiler inspector also. Witness approved of the *ex-officio* appointment of the Deputy Commissioner and Civil Surgeon as inspectors and he would give these powers to the Sub-Divisional Officer also. He would encourage education, but would not compel mill owners to provide it.

NOTE.—Owing to illness, Mr. Walker was unable to verify the correctness of this abstract of his oral evidence.

WITNESS No. 252.

Mr. A. B. Napier, I.C.S., Deputy Commissioner, Nagpur.

Mr. A. B. Napier. *Oral evidence.*

I would premise that my experience of factories is very limited. I had never inspected one till I came to this district a few months ago, and now I have only inspected cotton gins and presses in country villages. I see no reason to limit the working hours of adult males, but I think the present restriction in regard to females is wise. I have seen no deterioration. Eleven hours for women seems a proper maximum. I can see no way of enforcing this except by the maintenance of attendance rolls and seeing that there are enough spare workers to allow reliefs. Coupled with this must be an authorized register showing how long the engines work. From this a calculation will show if the women must have worked too long. If there are sufficient reliefs, it may be taken for granted that the women will have taken advantage of them. For gins I see no reason to object to work going on from sunrise to half an hour after sunset or even till 8 P. M., subject to the 11-hour limit. There is a great trouble in country places in having the clocks correct. Again I have found that it is nobody's business to see that the mills stop work at 8 P.M. I lately fined the manager of one company for keeping women after 8 P. M., but I only discovered

it from his private registers. As a matter of fact few gins this year worked anything like the full legal hours except on very few occasions. I agree that a midday interval of at least half an hour should be given. I have seen no deterioration as the result of the illegal employment of children as adults. A prosecution is pending in regard to employment of children without maintaining the prescribed registers, but as a matter of fact the employment of children in the country villages is most uncommon. I do not think that in Nagpur any special arrangements for 'young persons' are needed. There seems no tendency at present to overwork them or for the 'young persons' to allow themselves to be overworked. I see no particular harm in women working at night, provided they are on shifts which have not worked by day. In India it seems to me that the habits of the people of sleeping a good deal in the day and keeping awake long into the night, especially in the hot weather, differentiate the question from that in Europe. I should like to see the minimum age raised at least to 10, to give more time for education and not merely for fear of physical degeneration. It would be impossible, I think, to forbid the employment of children, until certificates are given, without an extra staff of inspectors, especially in country towns. I think that with fair inspection the work that could be taken between two inspections, should not be sufficient to make for deterioration if any mistake has been made. It seems to me that the provision of elementary education must depend a great deal on the number of children employed. I think local authorities might be allowed to prescribe the provision of education in special cases, but I would not recommend its being obligatory in all cases. I have not the necessary knowledge to give a decided opinion, but in one cotton press I saw a state of things which should certainly be stopped. There is a cleaning machine through which the cotton is passed and where the dust is blown away by means of a blast of air. This faces the press in order to facilitate the transfer of the cleaned cotton to the press. All the operatives here kept cloths tied over their mouths. All the dust, however, was blown to the end of the room where the press was working and where the operatives, apparently owing to the more strenuous labour, could not similarly close their mouths, but were working in the most horrible atmosphere, which, I think, could not fail to be deleterious to health. Latrine accommodation may be provided, but in none of some eight or ten factories inspected by me were they ever used. Any further latrine regulations should, I think, be for special not general application. It seems a wise precaution to have doors opening outwards in case of fire. It appears to me that the law is deficient in regard to penalties for breach of rules made under section 18 of the Act, and also that the power to make rules is insufficient. For example, in the Central Provinces Rules Notification No. 3252, dated 21st March 1906, we have a rule, "The manager shall be responsible for seeing that a workman who goes to replace a belt * * * shall not wear any loose clothing." Lately a man was killed by his loose clothing being caught when he was detaching a belt; in this case (*a*) the rule spoke only of replacing, not of detaching; (*b*) the rule seems hardly one in relation to the fencing of machinery, section 18 (*a*), though it might come under 18 (*g*); and (*c*) there is no power of enforcing the responsibility or of punishing the manager, as in this matter the only penal clause is under section 15 (*c*). In another case which came to my notice the inspector complained of unreasonable delay in complying with an order to supply a starting or stopping handle, but this again does not come under any clause of section 15. It seems to me that though the Act should be administered uniformly in the main, the rules under it must vary to suit varying circumstances. The provision of medical inspectors seems purely a question of the number of factories. In Nagpur District I am opinion that we want two Civil Surgeons one for the town and the other for the district, but I do not think that a separate medical inspector, if he had no other work, would have sufficient to do.

Mr. A. B. Napier.

Witness thought there were a number of abuses in the district in connection with the employment of labour, the chief being the employment of females beyond the eleven hours a day, and the employment of children without proper registration. He had instituted some prosecutions and obtained convictions. It seemed impossible properly to enforce the Act at the present time owing to the indefiniteness of the rules, which often did not give the power to enforce responsibility. A record of the engine-running hours should be kept in all factories. He did not think this register would be falsified, as there would be means of detecting falsification, and if necessary he could prosecute the owner for falsifying the register. An attendance roll of all protected persons ought also to be compulsory. He approved of raising the minimum age for children to 10 years. As child labour was so scarce, they should be careful to see that the mills did not exploit the children. A child might not be physically deficient owing to mill work, but she might become mentally deficient. There was certainly no ill-treatment of children in order to make them work. A parent might force his child to work at a factory, but on getting there the child would loiter about, and would not be ill-used. Indian labour was independent, and would not work beyond the hours that it liked. He did not object to unexamined children being employed between the two inspections of the Civil Surgeon, though it would be better to let the hospital assistant pass the children provisionally. He considered that work at the press openers was harmful and objectionable; the ventilation should be greatly improved. There was a bad accident recently at Volkart Brothers' opener, through the head of a match getting into the cotton. He approved of steps being taken to reduce the probability of such accidents. Witness thought that they would still have to rely on the Civil Surgeons for assistance in inspection work, even if a proper assistant were granted to the special factory inspector. On general administrative grounds there ought to be two Civil Surgeons in Nagpur, and if such an arrangement were made then it would be possible for these officers to do the inspection work. He would encourage education, and believed the children would attend if schools were provided. He had very little experience of cotton mills, but was of opinion that a fixed legislative day was desirable. The new Act should be plainly worded so as to provide penalties for the breach of all rules made under it. The Deputy Commissioner, as inspector, would be the prosecutor in many factory cases; but he himself could no under the ordinary procedure law, try such a case without the consent of the accused.

Oral evidence.

Witness No 253.

Lieutenant-Colonel R. B. Roe, I.M.S., Civil Surgeon, Nagpur.

Lieutenant-Colonel R. B. Roe, I.M.S.

I am acquainted with gin and press factory operatives, who do not work for the entire year I am slightly acquainted with spinning and weaving mill operatives. I can produce no statistics

Written evidence.

Lieutenant-Colonel R. B. Roe, I.M.S. *Written evidence.*

regarding the health of operatives. But I have come across no cases in which they compare unfavourably with the general population as regards health. I have found the factory population equal to the general average of the same class as regards physique. I have never observed any specific classes of diseases as pecular to operatives, but I have no statistics on the point. As regards determination of age, I rely on general appearance. The dentition test I consider valueless. When I first examined children, I aged them by their dentition, but the results (compared with general appearance) appeared to me to be in many cases extraordinary, and I soon gave up this method. I have no knowledge as to when the permanent teeth are likely to appear in native children. As far as my limited experience goes, the law as regards the employment of children is rarely evaded. I have found children at my inspections to be propely certified and I have never had reason to believe that the time tables are false. I do not think whole-time medical inspectors are needed in these provinces. I consider the standard of latrine accommodation of 1 seat to 25 operatives suitable. I do not think that the physique of adult male workers has been affected by long hours, or that legislation on the point is needed in these Provinces. In gins and presses, for example, men can always obtain an hour's rest, I believe, when they need it. I have no opinion as to what the hours should be. The engine should, I consider, be stopped for half an hour at midday, as is the case now. I do not think a class of "young persons" is necessary. As regards the minimum age of children, I have no decided opinion on the subject, but I should be inclined to raise it to 10 years. Certificates of physical fitness are now required in the Central Provinces, but I have never that I can remember met with a case in which I thought the child unfit. I think that no second certificate is required before a half-timer is employed as a full-timer. If a child has reached 14 years of age according to his certificate, he or she should be permitted to work as a full-timer. Children should be employed in regular sets; I do not see how a time-table could otherwise be kept. A rule should certainly be made to prevent unemployed children from accompanying workers. The manager should be held responsible for enforcing this order, and he should, if necessary, be prosecuted. Doors should, I consider, be made to open outwards. I should be inclined to think that circumstances differ materially in different parts of India, and that one uniform law would be objectionable.

Oral evidence.

Witness had not noticed any deterioration of health among factory workers. There was no obvious deterioration, but he had not specially enquired into the matter. He had not found phthisis, or other lung complaints, to be more prevalent among factory workers than the outside population. He considered the factory children to be of good physique, and had not seen one whom he should consider unhealthy or underfed. He had abandoned the dentition test, since the passing of the amended Act in favour of general physical development. He considered the age of nine to be more difficult to determine than the age of fourteen. On the new form of age certificate he had to note whether a child was physically unfit, but this did not mean that the child was rejected, even if unfit. The owner of the factory could still employ the child if he so desired. Only about one *per cent.* would be classified as unfit. There would be no hardship in forcing children to obtain a certificate of physical fitness. The question of physical fitness was largely a matter of opinion, but there would always be some symptoms which would be apparent to every one in the case of an unfit child. At present the Nagpur children came to his bungalow for examination. The Badnera children were brought to Amraoti. He examinad between 600 and 700 children last year, but he had not gone into the question why they were continually changing from mill to mill. He always took their thumb impressions, but did not enter up the identification marks column himself. Had he to do so it would give him a great deal of extra work. He considered that it would be a move in the right direction to raise the age for children to 10, but he did not hold strong views on the subject. Theoretically, the air in gins and presses was very bad, but in practice he had not found any ill-effects therefrom, and he did not think that the evil effects were so great as to call for immediate action unless the defects could be remedied easily. He had not noticed any increased sickness in the cotton season. It would, of course, be advantageous if they could mitigate the nuisance caused by the dust and fluff in gins, mills, presses, etc.

Witness No. 254.

Mr. E. R. Powell, Senior Inspector of Factories, Central Provinces and Berar.

Mr. E. R. Powell. *Written evidence.*

In my opinion the working hours of adult males should be limited for the reason that the natural stamina of the class of the operators now employed in textile factories, is not equal to the physical strain imposed upon them by the present long working hours, and although the results of these long hours may not be visible it is only natural to suppose that their physique must suffer and serious consequences follow. A limit of 11 hours should be fixed and constitute a working day. The method for enforcing the restriction would be to restrict the working hours of the engines. The legal working hours should be from 6 A.M. to 6 P.M., with two intervals for rest and food, in place of the usual one, of half an hour during the course of the day, for instance the first interval might be between 8-30 A.M. and 9 A.M. and second interval between 12-30 A.M. and 1 P.M., or such time as may be considered suitable or convenient. These two intervals would allow for all that is necessary, in the way of rest, food, smokes, etc., etc., and would so save a deal of loitering so much complained of now a days, by shortening the working hours in the morning the period when most of the loitering is done. No need then would remain for the workmen to leave their work on any pretence, unless for actual necessity, and it is then obvious, that better control and discipline could be maintained over the work people than can be expected under the existing conditions. Ordinarily the starting and stopping of the engines should be restricted to certain periods. Without this it would not be feasible to maintain a reasonable amount of check against irregular running, if the occupiers were permitted to run and stop their engines, at any irregular time they choose between noon and 2 P.M., as is often done in smaller factories at present. In any case the actual working hours of the factory, together with the prescribed intervals for rest and food, should be declared in the time-table exhibited on the premises. If possible the legal working hours should be from 6 A.M to 6 P M. with an interval of an hour or half an hour, as the case may be. On the other hand, if it is decided that the legal working hours of the day shifts should be from 5 A.M. to 8 P. M., provided that no adult male should work for more than 11 or 12 hours, then the legal working hours would border very much on the old lines, and the question of shifts would certainly involve more check and supervision than is necessary at present.

Regarding the question of creating a class of young persons, a good deal would seem to depend on the direction it is proposed to move. If it is eventually decided to restrict adult male labour and the legal working hours of the factories, then the necessity does not seem to exist, otherwise, there can be no possible doubt that some legislation is needed either by raising the age or creating the class of young persons, but the latter would not materially affect the working hours of some of the mills, where the percentage of the class of young persons employed is not great unless it is further proposed to raise the age to between 14 and 20. If the class of young persons were created it follows that a special register would be necessary for check and verification. The employment of women at night should be entirely prohibited and their hours restricted to from 6 A.M. to 6 P.M., with the prescribed interval of one and a half hours as at present for rest and food. The question of employing women at night chiefly affects ginning factories which in recent years have increased so much beyond the requirements that if any material loss is actually incurred by this prohibition it would probably only affect individual factory owners. However, if it is decided otherwise, then I would strongly urge that the installation of electric lights be made compulsory in all factories working at night. I this connection I would also state that owing to the large increase of ginning and pressing factories the majority of them do not now work for more than two or three months during a calendar year. As a result many factory owners have recently approached the respective District Magistrate asking for the excision of their factories from the respective district registers. In my opinion, the time has come to place all ginning, pressing and miscellaneous factories under the provisions of the Factories Act, irrespective of whether they employ 50 persons simultaneously on any day, or whether they work for four months if it is intended to guard dangerous machinery and to regulate manual labour in these miscellaneous factories in the near future. The minimum age of nine at which the children are now allowed to work in factories is in my opinion suitable for the nature of the work they have ordinarily to perform. Both age and physical fitness certificates should be necessary prior to the employment of children in factories. But the necessity for the age and physical fitness certificates for half-timers before they are allowed to work as full-time adults seems more obvious to my mind than in the case of children being employed in the first instance as half-timers. Children should not be allowed to work except in regular shifts, morning and evening, perscribed by law. For the welfare of half-timers in after years, I am of the decided opinion that it be compulsory on factory owners to provide elementary education at their own expense, but in this connection I would specially recommend that this agency be also utilized to counteract some of the malpractices resorted to in counection with the violation of child labour which undoubtedly exists in some of these textile factories under the present conditions (please see extract of letter No. 340, dated the 9th August 1907 (attached) addressed to the Secretary to the Hon'ble the Chief Commissioner, Central Provinces. If the inspection of factories employing children is to be put on a sound basis an amendment in the Act is necessary. A section enacting that any child found within the premises of a factory containing machinery in motion should be presumed to be at work is all that is necessary in my opinion to overcome this particular kind of evasion. The question of ventilation in some factories undoubtedly requires consideration since factory owners invariably show more concern regarding the requirements of the textile manufacture than the health of their employés. For example, at a recent inspection of one of the local mills I found that all the doors and windows of the cards, frames and spinning department were shut down regardless of ventilation. I noted the fact in the visitor's book of the mill and also brought it to the notice of one of the Directors of the mill, who happened to be visiting the mills the same morning. I visited the mill again the following morning and found the departments still working under identically the same conditions as the day before, although they were warned the day previous. As a result the matter was reported to the District Magistrate in view of a prosecution being instituted against the occupier of the mill. The sampling of air taken from factories seems necessary and might with advantage be undertaken on a large scale and after series of tests from different districts and at different seasons a standard of purity could be perscribed. Similarly, an attempt should be made to prescribe a standard of moisture for the air in factories, for here again I only recently during the inspection of one of the local mills found that in addition to the humidifier plant the crude method of flooding the floors of the mills was resorted to. But here, as in the former instance, a considerable amount of local data would be necessary to allow for dry winds, climatic influences. etc. A standard of purity should be fixed for the water used for humidifying purposes. As in Bombay, some of the mill tanks have sewage of the town, and the flats drain into them and besides they also contain decayed vegetable matter, with these elements combined it would not be safe if such water were to be used and sprayed through the humidifiers throughout the mill The standard latrine accommodation should be as in the Central Provinces, and should be raised to at least one seat for every 35 persons or fraction thereof and separate urinal accommodation insisted on in view of securing cleanliness. But in ginning and miscellaneous factories, the proportion should be further raised as under the existing rules these class of factories only provide about four seats, two for men and two for women, and so it often happens that much inconvenience and discomfort is felt by the work people having to wait admission to the latrines. It should be prescribed that all doors should readily open from inside outwards in case of fire and this could easily be arranged for in new mills and those under construction. But in this connection the number of fire escapes necessary may be considered at the same time. The guarding and fencing of machinery seems quite efficient at present. Guarding underground line shafts in ginning factories was not received very kindly at first, although clearly defined in section 2 under mill gearing. But the necessity was unfortunately emphasized by a fatal accident, which occurred in a case where an appeal was preferred against such an order. In my opinion the question of cross beams in narrow underground shaft galleries now calls for urgent attention. They are fixed in the inside walls of ginning factories and run across the shaft galleries as supports for the journals or bearings for the line shafting. In addition to causing an unnecessary amount of vibration they are a source of danger to the oilmen and *mochees* attending to the belts as they encumber the passage, for the whole length of the gallery and are a great hindrance. These could easily be removed and replaced by concrete or masonry pedestals which would answer the same purpose. This of course applies to narrow shaft galleries. Handles for starting and stopping machinery are an actual necessity, but in some factories it has been the common practice to work gins and openers without. In some ginning factories and presses the buildings, floorings and ladders are

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in a dilapidated condition, while in others no arrangements made for water as an ordinary protection against fire. I am of opinion that for the working of the Act the Local Government should be as at present vested with the power to frame rules to suit local conditions. Full-time medical inspectors of factories may be necessary for certifying the ages of children in large trade centres like Calcutta, Bombay, and Madras and even in large towns like Ahmedabad where there are large textile factories, but for the working of the Act the number of special factory inspectors should be raised as necessity may demand from time to time.

Extract from letter No. 340, dated the 9th August 1907, from E. R. Powell, Esq., Senior Inspector of Factories, Central Provinces and Berar, to the Secretary to the Hon'ble the Chief Commissioner, Central Provinces.

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Secondly, I beg respectfully to suggest that a special check on each of the mills in the Province could be satisfactorily established by the following. A practice I believe exists in some of the mills in Bombay—and did in Messrs. Greaves, Cotton and Company when I was in their service for 3½ years in 1897 and in some other mills—of employing a vernacular schoolmaster to give half-timers instruction before and after their regular shifts of work. From the remarks contained in the recent Report of the Textile Factory Labour Committee I am of the respectful opinion that this principle will be officially recognised and insisted on in the near future.

I would therefore specially recommend that this agency also be utilised to counteract some of the present malpractices which exist in some of the mills. In the following manner, that all vernacular schoolmasters should be employed for each of the mills in the Province assuming that the school room or shed is on the mill premises. The shifts should be made uniform throughout all the mills in the Province, and restricted to the two shifts only, morning and evening. The evening shifts would then attend school from say 10 A. M. and receive instruction up to 12 noon, when they would be allowed the usual half hour for their food, and the necessary recreation. The morning shift on coming out of the mill would enter the school room or shed and be mustered by the vernacular schoolmaster prior to being let out for their food and recreation. At 12-30 P. M. the second or evening shift would then be allowed to go into the mill for work. The first or morning shift would be retained in school up to 2 30 P.M. when they would be allowed to go home. The vernacular schoolmaster would attend the mill from about 8-30 A M. to about 5 P M. and besides giving half-timers instruction keep an independent register of all the children employed in the mill. This would enable him on coming to the mill in the morning to check the daily register with the children already working in the mill, for the first or morning shift. Subsequently in the evening say about 4 o'clock he could again check the register with the children working in the second or evening shift. The object of these check visits is to prevent any outside children being introduced into the mill either during the morning or evening shifts when there are large numbers of absentees.

It then, in my respectful opinion, follows that the vernacular schoolmaster must be selected and employed by the Factory Department, although paid by the respective mills through the factory office. He would then practically be a part of the Factory Establishment. I would therefore recommend that these vernacular schoolmasters should be given a bonus from this Department for good services rendered at the end of the year.

The preceding proposals regarding the amendment of the age certificates combined with the mill vernacular schoolmaster would in my opinion go a long way to check half-timers being worked full-time, or at any period when they should be at rest, and this would also remove any chance of half-timers being employed in the same, or any other mill in the localities. All half-timers would then practically be confined in their respective schools for two hours before and after the regular hours of shifts, and would subsequently be of no use, ordinarily, to any mill owner.

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Oral evidence.

Witness stated that his chief experience was of boiler inspecting. He had a short experience of factory and boiler work in Sind, and joined the Central Provinces on 15th January 1907. Until that date the factories in the Central Provinces were inspected by the inspector of factories from Bombay. He had, so far, only done factory inspections in that Province, as the Boiler Act was only made applicable last March. In future when he inspected boilers he would have to notify the owner of his visit, but he would also be able to pay surprise visits for purposes of factory inspection. With the assistance of the deputy inspector in Berar he thought it would be possible to visit each factory at least three times a year; one, a formal visit for boiler purposes and the other two surprise visits. It is the practice to stop ginning factories to permit of the boiler being inspected. He could not get round all the boilers before the season commenced, and in a great many cases the factory had started work before he made his inspection. There were eight cotton mills in the Central Provinces and Berar, and one was under construction at Akola. There were 105 ginning and pressing factories in the Central Provinces and 213 in Berar. There were also two pottery works at Jubbulpore, and Railway workshops at Jubbulpore and Nagpur. Most of the ginning factories in the Central Provinces were on the railway, and so with the help of the officer in Berar both the boiler and factory inspection work could be thoroughly done under the present arrangement. If there were a stricter definition of the word "factory" it would bring an additional *five per cent.* of factories under the Act. Witness had heard no complaints of over inspection, and did not consider the statement that owners had been put to expense through the contradictory orders of different inspectors justifiable or correct There was a difference of opinion as to whether he could initiate prosecutions himself. On 20th November 1907, he reported the Akola Mill to the District Magistrate for bad ventilation. The District Magistrate said he wished to retain the power of prosecution in his own hands for the present and requested that all irregularities should be brought to his notice in the first instance. Witness was afterwards informed that action had been taken in regard to the Akola Mill. He did not know what that action was. Witness considered that under section 3 of the Act he could initiate prosecutions himself and was of opinion that the wholesome effect of a prosecution was lost if a long time

elapsed between the infraction of the law and the proceedings under the Act He was over- Mr. E. B. Powell.
powered by the bad atmosphere at the Akola Mill, where all doors and windows were closed. He also saw a remark by the officiating Civil Surgeon in the visitors book of the Pulgaon Mill about March 1907 that on account of the accumulations of foul air overnight, and lack of proper ventilation, workers were falling down unconscious for two or three mornings. Nothing had since been done there to improve the ventilation, except that the doors and windows were left open at night. There was a great necessity for the introduction of a standard of purity of air. As the Act stood at present there had been no prosecutions for bad ventilation. The cotton mills worked daylight hours, and the gins usually from 5 A.M. to 8 P.M. In his opinion, on general grounds, these hours were far too long. One night at Amraoti he made inspections, and found seven gins out of 22 working up to 11 P.M., without the approval of the local inspector under Section 6 (1). They were employing the same hands who had worked all day. The gins kept no register of attendance, and no engine-running log book, and so one could not tell the working hour of the females. He reported this matter to the Deputy Commissioner of Amraoti In five of these seven factories he found children, engaged in ginning on the platforms contrary to section 7 (2) He approved of an engine-running book being made compulsory, and also registers of protected workers. In his opinion women were in the habit of working in two factories during the 24 hours, but this could not be proved as no names were registered. Under the combination system only certain gins worked, and the remainder closed down in order to raise prices. If all the factories worked by day there would be no necessity for night work by women, to which he altogether objected He had had no complaints from women of their having to work at nights Ordinarily it was to the advantage of the cultivator to get his cotton into the consuming market as fast as possible, but cultivators and cotton merchants have been known to keep back the crop of one season till the following when the prices were bad. He approved of factory owners being compelled to provide education for children There would be no danger from the school being in the compound if the schoolmaster was under the control of the factory department The schoolmaster would keep a separate register, and this would act as an additional check The supply of children would not be affected. Witness considered that the wording of section 5 (B), sub section 2, clause (*a*) was too elastic, and that the cleaning of machinery did not come within the meaning of "repairs." The clause relating to the one day's holiday in seven also wanted remodelling, in that owners did not always abide by the notice which they sent in. It was further essential that an engine-running log book should be kept in order to arrive at the length of the working day of the women, and the one-and a-half hour's interval for the women should be specified, In clause 7 (2) the hours for children from 5 A.M to 8 P.M. covered too extensive a period, and the hours of 6 A.M. to 6 P.M. should be substituted This would not only protect children from being over worked, but would also at the same time tend to restrict adult labour Under section 10 it should be clearly stated that owners must give notice when time-tables were changed. The time tables were changed so frequently that it was impossible to detect irregularities. At the Hinganghat Mill he found two time-tables on the boards, showing different times for intervals, and on his representation the manager ordered one to be removed. Section 12 provides for the guarding and fencing of machinery, but there is no provision for compelling owners to supply belt guides commonly known as starting and stopping handles to the gins, openers, and other machines Without these guides or handles the machine is incomplete, but he had no power to make owners provide them. If a man was caught in the machine it could not be stopped, without either the belt being thrown off by hand or the engine being stopped so handles should be made compulsory. Section 14 required alteration in order that every person should give notice when he becomes an occupier of a factory, and under section 17 the owners of a factory should be made legally responsible for the conduct of that factory. At present the owner shifted responsibility to the manager, the manager to the overseer, and so on. The press house openers are generally made in India. It was more of a cleaning than a mixing machine, and high speed was necessary It worked at a great speed to open up the fibre and clean the cotton As at present constructed it was a dangerous machine, both through stones and fire being hurled out, and owing to the number of fires which occurred. He thought the danger from fire could be reduced by putting a baffle plate in front of the opener, with a lattice gear to carry the cotton some distance away. The opener should also be enclosed. By these means the fire would be confined to a small area, and on an alarm or being given the operatives would have some time to make good their escape. At present the room was full of cotton-fly and dust and directly a fire occurred the whole place becomes ignited in an instant, and the operatives are in great danger Whatever contrivance was suggested the chief point should be to keep the operatives as far as possible from the machine. He did not consider it feasible so to alter the machine that all people working in front of it would have to stand. He approved of the opener being built round, and women should certainly be prohibited from working in front of, or adjacent to, the opener. In one case, at Sheogaon owing to the entrance to the opener standing downwards one of the operatives working on the platform slipped, tumbled into the machine, and was mangled before any assistance could be rendered. Another objection is the inclined plane of the platform fitted at the inlet side of the openers. This inclined plane leads into the opener, and is certainly very dangerous, since men and women are employed on the top of the plane. In many instances ignorant operatives from out lying districts are found employed in these dangerous positions.

Witness No. 255.

Mr. J. W. Gallon, Nagpur.

I represent Messrs. Ralli Brothers' pressing factories and ginning mills in Berar, the Mr. J. W. Gallon.
Central Provinces, and the Tinnevelly district. Approximately 60 men and 10 women are employ- *Written evidence.*
ed in pressing factories, and 82 women and 87 men in the ginning mills. These numbers vary somewhat according to the size of the factories and mills. Mills and presses in this district usually start work about the 1st November and finish in April, May or June, according to the length of the cotton season. In the Tinnevelly district they usually work from February to August or September. The usual hours a ginning mill works are from 6 A.M. to 6 P.M., except in the case of night work, when they work for twenty-four hours with the usual stoppages of half

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an hour at midday, and half an hour at midnight, and for twenty-four hours once a week. With regard to a press factory the hours are usually from 6 A.M. to 6 P.M., but occasionally a few hours longer are worked according to requirements. The average number of hours a person is employed in a ginning mill is twelve, during which time they have half an hour's stoppage at midday There are, however, 25 *per cent.* more women employed than are actually required to work the factory. It is their duty to relieve the other women as required, so that probably each woman will have intervals of rest amounting in the aggregate to at least two and a half hours. There is, however, no stated intervals at which the women are relieved. When a woman requires a relief for food, rest or other purposes, she informs the *mukadami*, who provides a relief. The usual average number of hours a person is employed in a press factory is twelve, but this varies considerably according to the requirements of the season. The press may be required to work five or six hours a day, or it may be necessary to work eighteen hours, although the latter time is extremely are, and usually does not occur more than four or five times in a season. The press *hamals* and others employed in the press house have no fixed intervals allowed for rest nor is the press stopped for half an hour at midday. There are, however, a sufficient number of extra hands employed to ensure reliefs being given at any time that may be required for food or rest. The duty of seeing that reliefs are given as required devolves on the press overseer, and I have never heard a complaint from any of the *hamals* regarding insufficient time being allowed for food and rest. I certainly approve of the proposal to bring under the Factory Act all ginning mills and pressing factories, irrespective of the number of months they work in a year, or the number of hands employed, for the following reasons, *viz.* (1) unfair competition The owner of a ginning mill or press factory which comes under the Factory Act has to employ a certificated engineer at a salary of any thing between Rs. 100 and Rs. 250 a month. He also, in the event of his wishing to work his factory for longer than twelve hours a day, must in addition employ a night engineer at a salary of anything between Rs 70 and Rs. 100 a month. Again, he must only work his employees for stated hours as allowed by the Act; he must not employ children, he must have very ample latrine accommodation, his factory must be periodically painted and whitewashed according to the Act, and he must fit up more or less elaborate guards to pulleys and fencing for shafting, according to the ideas of the local factory inspector. On the other hand, a factory owner whose factory does not come under the Act need only employ a fitter to look after his boiler and prime mover at a monthly salary of anything between Rs. 30 and Rs. 50. He can work day and night without engaging a night engineer or even a night fitter, he can work his employees as many hours as he thinks fit or as many hours as they will work, and has no expenses with regard to cleanliness or safeguarding the lives and limbs of his employees. Consequently for capital expended the small factory owner whose factory does not come under the Act has larger profits than the large factory owners whose factory does. (2) Danger to employees. The danger to the lives and limbs of employees from defective boilers and prime movers or unfenced and unguarded machinery while it is running is just as great individually, in a small factory working only for a few weeks in the year and which does not at present come under the Factory Act, as in a large one which does. I do not approve of the suggestion that the employment of women on night work should be prohibited, provided they are employed under proper supervision, that is to say, care should be taken that no women are employed in a ginning mill or pressing factory for night work that have been employed in other ginning mills or pressing factories during the day. This might be more or less effectively brought about by the employment of a gin *mukadam* to provide the women, giving him distinctly to understand that he is liable to a severe penalty if he provides women for night work who have been employed elsewhere during the day. For the short time that women can be employed on night work during a cotton season, seldom, if ever, exceeding three months, I consider that it would not injure them either mentally or physically, providing of course they are in good health to begin with. Further as being employed on night work is optional with the women themselves, I consider it would be a distinct hardship to prohibit them from being so employed, as owing to the difficulty of finding employment during the slack season they are glad of the opportunity of earning a few extra rupees during the cotton season. Therefore, to employ men on night work instead of women would lessen the total number of women employed in ginning mills, and consequently their earnings would be less and possibly their poverty still greater than it is at present, Also, there are many women who would be glad to earn a few rupees by working night work who owing to children and domestic matters find themselves unable to work in ginning factories during the day. I do not know of any modifications necessary to be made in the present Factory Act, should it be made applicable to all ginning mills and presses. I suggest, however, that the Act should be revised especially with regard to the number of hours of working and system of shifts, to be employed both for men and women, and also engineers, and that it should be couched in clear and unmistakable language. It should not be left to the option of local Factory Inspectors to interpret the Act according to their individual fancies. I agree with the view that the line shafting should be adequately fenced. There are no objections whatever to the shafting being cased in between the drums or pulleys, and it certainly reduces the liability to accident. I may add that the whole of our ginning mills in Berar and the Central Provinces have their line shafting so cased in, and I have found from actual experience that there are no objections to it and that it certainly decreases considerably the liability to accident. I see no reason why women any more than men should be prohibited from working in front of an opener, as in case of a stone being hurled from it, it would, I take it, be as injurious to the men as the women, providing they came in contact with it, and in case of fire they would stand an equal chance with the men of escaping. With regard to the prevention of accidents from stones being hurled from the openers as these stones are almost invariably thrown out at a tangent to the path of the opener teeth, a curved guard in front, as shown in the sketch,* would certainly reduce the number of accidents if it did not entirely prevent them. The objection to it is that it causes the cotton to be thrown down nearer the mouth of the opener than it would otherwise be, but as a certain number of men or women have under present conditions to be employed clearing the cotton away from the mouth of the opener, and as the same number could just as effectually clear it away with the guard fixed in position, this objection need not, I think, be considered insuperable. Of course the cotton could be carefully picked over and freed from stones before being put through the opener. but this seems to me to be a laborious and probably ineffective method. With regard to the prevention of fires, providing the opener is properly lagged

* Not reproduced.

inside with wood, and the teeth are made of wood so that there is no chance of stones coming in contact with iron or steel, and causing a spark, there is very little chance of a fire taking place. Of course there is always the danger of matches being left amongst the cotton, but so far as I can see it is impossible to eliminate that. The accidents that have occurred in our factories through machinery or belting during the last five years are as follows:— Mr. J. W. Gallon

Nagpur.—One only which was fatal. An oilman was caught by the belting and whirled round the shaft. He died in hospital four days later. The shafting has now been fenced.

Shegaon.—Ten. None fatal.

(1) A press oilman had four fingers injured while oiling the press rams.

(2) A drilling machine man had one finger slightly hurt while working the drilling machine.

(3) Assistant turner had two fingers hurt in the lathe cog wheels.

(4) An oilman got one finger hurt while putting on a roller belt.

(5) An oilman had an arm injured by allowing his elbow to strike against the fly-wheel while oiling the governor shaft.

(6) A press *hamal* had his foot almost taken off through putting his foot in the cotton filling box at the time the bale chamber was being moved round.

(7) A coolie had one of his fingers injured by putting it in the delivery lattice of the Crighton opener when it was working.

(8) A drilling machine man had his fingers smashed in the bevel gear of the drilling machine. This has since been fenced.

(9) An oilman had a slight contusion of the hand by the spokes of the roller pulley striking his knuckles whilst dusting resin on the belting.

(10) A coolie had his left foot injured by getting it jammed by the spokes of the delivery cylinder of the Hodgart's opener.

Amraoti—None.

Akola.—Six. None fatal.

(1) A coolie had three fingers injured in the lathe gearing. This has since been fenced.

(2) Two press *hamals* were knocked down by a bale slipping out of the bale chamber. Only very slightly hurt.

(3) A coolie had bones of left hand broken through putting his hand in feeding hole of Crighton. This hole cannot be blocked up, or it becomes impossible to feed the opener.

(4) A press *hamal* had a thumb slighty injured through a bale slipping out of the bale chamber.

(5) A woman had a slight contused scalp wound owing to a small pulley having been dropped on her head through the carelessness of a gin fitter.

(6) An oilman had left side of back slightly injured through slipping off the vertical shaft of the Crighton opener when the engine was started. He had no business to be sitting on it.

Khamgaon.—Four. None fatal.

(1) A *moochi* had a finger injured while putting on a gin driving belt.

(2) A coolie had hand and arm badly smashed through putting it in mouth of the Hodgart's cotton opener. This has since been guarded as effectively as possible.

(3) An oilman had a thumb slightly injured through cleaning the engine crosshead while the engine was in motion, There was no necessity to perform this and it is impossible to fence the crosshead.

(4) A *moochi* had two fingers injured while putting on a belt.

Chickli.—One, not fatal. An oilman had one finger fractured while putting a belt on a roller pulley.

Witness stated that he had had experience of the ginning and pressing industry in various parts of India. In South India the season was just commencing. With a small crop the season would last about three months, and with a good crop eight months at the outside. He did not think that gins under the Act were adversely affected in competition with those not under the Act, but he approved of all being brought under the Act. In the Broach district some of the factories were outside the Act. His firm had agencies in that district, but no factories. Neither had they any factories in Native States. He did not think that the application of the Act to all gins would drive gins over the border into Native State territory. He considered that the industry would be much hampered if the employment of women at nights were prohibited. Men had an objection to ginning work and such a prohibition would add to the poverty of the women. There was no danger in the work, and it was essentially a woman's employment, certainly no harder than punkha pulling; though this was sometimes done in an atmosphere better than that of the gins. In the face of such a prohibition they would have to try and obtain men at an increased cost In all the Ralli gins there was a fixed half hour interval at 12 o'clock, but the extra one hour for the women was only given by the employment of 30 *per cent.* extra hands. He thought that the wording of the Act in this respect was open to two constructions, and in his opinion if the local inspector approved of the shifts then the half hour midday stoppage need not be given. The inspector approved of the shifts, and still pressed for the midday stoppage. There were one or two fires in the press house every year, and all their press houses had a complete sprinkler system. They also endeavoured to keep the workers, as far as was possible from the front of the opener. The men worked on either side of the machine and took the cotton away by means of bamboo poles. The whole point lay in not letting a large quantity of cotton accumulate in *Oral evidence.*

Mr. J. W. Gallon.

front of the opener. If the front of the opener was kept clear then he could not understand any person being burnt to death. He had seen fires in the press houses, but had never seen any person injured thereby. He had never seen the whole press house set on fire in an instant. The only way to prevent accidents was to prevent accumulations of cotton in front of the opener. He should say that accidents were preventible, and if an accident happened the owner should be held responsible, if culpable negligence on his part could be proved. His firm had an opener at Tuticorin. The press opener was not absolutely necessary to use, but it was advisable to use it. It mixed the cotton, opened it and made it in better condition for pressing. The appearance of the sample was also improved. In his experience they were used everywhere, and from a commercial point of view it was essential to have an opener. If the machine in its present condition were declared dangerous, it would not be beyond the wit of man to devise some guard for it. By fixing a curved screen over the delivery end, the cotton would be thrown on the ground immediately in front of the opener. In case of fire in the opener the screen would prevent the burning cotton from being thrown from the mouth of the opener, broadcast over the press house and over the operatives working in the press house, and would at any rate confine the fire in the beginning to the immediate vicinity of the delivery end of the opener. If prompt action were taken it might be prevented from spreading further. It would also reduce fatal accidents from burns to a minimum. If the cotton was thrown out, straight on to the ground, the cotton would not be affected. The cotton would merely come down straight instead of being thrown all over the place, and the operatives would be able to see any fire and run away. Generally the cotton was flung up in the air, but there was no advantage in doing so. He had experimented at Shegaon, and although the operatives thought there was some gain in having the cotton hurled through the air, yet he was convinced that there was not, and that the cotton would be just as good if delivered straight on the ground. It was also possible to introduce a back draught by the use of the curved screen with a grating underneath which would clean the cotton much better than flinging it all over the room He allowed no women to work in front of the opener and had no objection to a prohibition to that effect. The men also could work at the sides.

Witness No. 256.

Mr. Bazanji Dadabhoy, Nagpur.

Mr. Bazanji Dadabhoy. *Written evidence.*

I represent at Nagpur the Empress Mills of the Central India Spinning, Weaving and Manufacturing Company, and also the ginning factories of the same Company at Nagpur, Wardha, Hinganghat, Warora, Akola and Yeotmal. The numbers of men, women and children employed at the Empress Mills, Nagpur, and at the ginning factories, are given in statement E attached. Statement A, giving the number of days in each year, during the last ten years, on which our factory has worked over $12\frac{1}{2}$ hours a day, and the average daily number of hours for each year during that 10 year period, is attached. The ginning factories have worked only 11 hours a day, or, when working night and day, 22 hours a day. Statement B gives the average production per spindle (we have only ring spindles) *per* hour of 6*s*, 10*s*, 16*s*, and 20*s*, reeling yarn, for each month of the year for the last eleven years. Statement C gives a summary of the same, showing the average production of the same counts *per* spindle *per* hour for an average day of 11 hours, of 12 hours, and of 13 hours respectively. It will be noticed that the shortest day gives the best average. But the increase is not such as to make up the loss that would be caused by the curtailment of the working time. The production depends upon the supervision exercised inside the mills. The stricter the supervision, the less will be the difference in the average hourly production. Then, in consequence of the long hours the men have usually to work, they have acquired the habit of going out at certain intervals, whether the day be long or short, and they take the same time outside, so that while an hour spent this way is $\frac{1}{13}$th of the working time on a long day of 13 hours, it is $\frac{1}{11}$th on a short day of 11 hours, which would tell against the production. If a regular working day of 11 hours be adopted, and two recesses of half an hour each be allowed, the men would not need to go out as they do under present conditions. Only a few might find it necessary to do so. In this way, the dawdling habits of the workpeople, of which so much is made, and which are really the effect and not the cause of long hours, would be changed, and steady work done. We have a proof of this in the case of females, who scarcely require to go out during working hours, as they have 3 recesses given them during the day. We allow 10 *per cent.* of the men to go out once in the morning, and once in the afternoon. They take about 30 minutes in the morning, and 25 minutes in the afternoon. We provide passes for two and a half *per cent.* only of the women to go out, but only a few of them take advantage of these passes. The real advantage then in the short time working will consist in the reduced number of workpeople employed. This may mean from 10 to 20 *per cent* of the number employed according to the practice prevailing in the several mills. So many extra operatives freed would enable the mill owners to work their machinery to its full extent; as, no doubt, in most mills some of the machines are constantly stopped for want of hands. The evil of the *batli* or substitute system would mostly be done away with. The substitutes are usually careless lazy loafers, who work when they please, and seldom take any interest in their work, often spoiling it. Above all, the humanizing influence that something like an ordinary day's work will have upon the men will make them regular in attendance, and steady in application to their duties; they will take some interest in their work, which they generally do not at present, and will probably settle down to the mill life, which is at present unattractive, and only resorted to for the income it brings. Those unaccustomed to mill life regard it as worse than jail life. I have watched the English mill hand at work, and I have passed many years watching the Indian operative at all times of the day, and I firmly believe that the latter has harder work to do. The reason is obvious. In England the cotton used is of a far superior quality, and the yarn spun is of much finer counts, and at the same time most of the mills run on the same counts from year's end to year's end, making them a speciality. Consequently there are few "piecings," "doffings," and "creeling," even though the hand has to tend a comparatively large number of spindles. In an Indian mill, the cotton used is of a poor quality, many managers and agents take a pride in making the mixings as low as possible, the yarn spun is of the coarse counts, and at the same time there is a great variety of them. Consequently there are incessant "piecings," "doffings," and "creelings." No wonder the

worker wants to go out as often as he can find a chance. While he is out his machine is running, and some one, who must be a spare hand, whatever he may be called, has to mind it. This, and the spinning of coarse counts, are the real causes of 50 to 100 *per cent.*—or, as one writer tried to make out 300 *per cent.*— of extra hands being employed in a Indian mill. If mill life could be made attractive, labour could easily be made plentiful, and further extensions made possible in the mill industry. I must admit that for two or even three years the mill owners will have to sacrifice a portion of their profits, and even pay increased wages to make up the workpeople's loss in wages due to short time. But the benefits to be gained ultimately will be far greater than the loss, as has been proved in the case of the Lancashire mills which work 56 hours a week and pay high wages. If a twelve hours day be fixed, mills will have to be worked by artificial light on short days, and extra expense will be caused, besides making it disagreeable to workpeople. Statement D, showing the percentage of waste made from carding to spinning point during the last 10 years, for an 11, 12 and 13 hours day, respectively, is annexed. The blow room loss is not taken into account, as it chiefly depends upon the class of cotton used. I think that, to meet the convenience of the certifying surgeon, who cannot be expected to be present at the mill daily, an employee should be allowed to work for a week at most, pending examination for a cerficate of physical fitness, as well as of age, prior to the employment of children on half-time. Our rule is to send the children for examination twice a week to the Civil Surgeon, who is *ex-officio* factory inspector also, and the arrangement has proved satisfactory. I doubt very much whether the recommendation that no half-timer should be permitted to work as an adult unless medically certified as physically fit for full-time work can be practically carried out. I can suggest no safeguards with the object of preventing half-timers who are refused certificates as adults in the factory in which they have worked from obtaining employment as adults at some other factory. Medical opinion has differed so much even as to age that children who have passed as under age before one officer have passed as adults before another, and *vice versâ*. In some cases, the same medical officer has been led to give different certificates to the same person. I have known full grown women reported by the medical officer as under age, and in one case a married woman, the mother of a child, was certified as a child, while her younger and unmarried sister was certified as an adult. The certificate of physical fitness will certainly lead to much greater confusion, as it will entirely depend upon the personal notions of each examiner. If it be decided to restrict the hours of adult labour, it would be preferable to fix a maximum number of hours, leaving it to the discretion of each individual employer to settle the time for the commencement and the termination of the day's work, subject to the condition that he should, at the beginning of each month, give notice to the factory inspector of the time he proposes to work during the month, in the same manner as he does at present regarding holidays. I think that factory inspectors of Indian training and experience would be more suitable than inspectors from the United Kingdom. If English experience be considered necessary, the best plan would be to send inspectors, appointed in India, for a few months to England. Any law that may be introduced restricting the working hours of adult males should contain ample provisions for as much elasticity as practicable in its actual operation, so that adult males, though prevented from attending to moving machinery inside factories, may, on occasions, be able to work overtime and earn extra wages by working in mixing rooms, carrying loads, cleaning, repairing, etc.; the main object of the restriction being to obviate regular confinement inside factories, among moving machinery, constantly from day to day. The housing of factory hands must be left to the discretion of factory owners; it is a matter in which they have to consult their own interest. I may, however, add that local workers in our city have generally their own huts, and would not leave them for any that we may provide for them. They have their own local associations and surroundings, which they would not like to give up We have put up buildings for imported labourers, who might take kindly to them. I wish to point out how the mill hands keep constantly changing. We had, on the first day of 1907,—

Mr. Basanji Dadabhoy.

Hands present	4,543	
Hands absent	788	
Total hands on the muster roll ...	5,331	
We took on during the year	4,915	hands
making	10 246	hands in all.
But we had, on the last day of the year, ...	5,124	hands present.
	1,175	hands absent.
making	6,299	hands in all.
leaving a deficiency of	3,947	hands.

Thus, during the year, between 4,000 and 5,000 hands changed their employment. Among these there have been those who only joined for a short time and left, and others who had left service once and rejoined. Thus, besides irregular attendance, constant changes of employment occur which must tell on the steady working and production of mills, and in this way cause loss to mill owners. This fact also makes it clear that long hours are not advantageous to the employers. There is no trade union among mill hands. If there be any grievance in any branch or department, a few men appear before the manager or his assistant and bring it to his notice, and his decision is submitted to. There has been no strike in our mills for the last 30 years. There was one about that time, just at the starting of the mills, owing to a misunderstanding as to the rate of piece-work for weavers. There is more independence being shown latterly than before, as work can easily be obtained elsewhere. However, when the men are treated with justice and some liberality, little trouble arises. I would not propose to raise the limit of working hours for women to 12, if the hours of work for men be limited to 12. I do not believe our men generally save money. A small percentage do; but mostly they are in debt, or live from hand to mouth. They are in the habit of spending what they get. Local men do go away on pilgrimage, or for other purposes, for a month, after a year or two's work. They do not as a rule put in the whole month. They consider they must absent themselves for domestic purposes or other reasons for two or three days a month, in addition to the regular weekly holidays. A statement—F—showing the attendance of workpeople is submitted. The up-country men who have still their connections at their

Mr. Baranji Dadabhoy.

native places go there for two or three months after 3 or 4 years' service. They generally obtain leave for the purpose, and rejoin their service on return. The mill hands do drink, but not to such a great extent that it may be considered a habitual vice. Statement O, showing the percentage of workers present and absent each month, for 21 months, is submitted. Though it seems anomalous, it is necessary to limit by legislation the working hours of adult males employed in charge of machinery moving by power inside factories. This is not considered necessary in other civilized countries, because the work of the men greatly depends upon that of women, whose working time is limited by law, and who are employed in much larger numbers than in India; and also because there are Trade Unions to look after the men's interests. I cannot say that the physique of workers has been noticeably affected by long hours. Their health seems to be about the same as, if not somewhat better than, that of other people of their class. This is due, I think, to their irregular attendance, and to their long absence at certain intervals. Considering the wages they earn, their health might be better; they might enjoy better home life; they might not absent themselves so much; and their employers might be benefited by regular, steady, and more skilful work, if they work shorter hours. Under present conditions, what skill they acquire at the commencement of their mill life comes to a standstill after a short period, as they become listless and indifferent owing to the monotonous grinding work from dawn to dusk, and even later. It is said that the men are, owing to scarcity of labour, masters of the situation, and can command their own terms. This is only partially true. They have no cohesion, and have not the means to stand out long for what they may consider to be their rights, being, most of them, in debt. Whatever they may have gained in the way of increased wages, &c., has been due to the rivalry among the factory owners themselves, who bid against each other in their eagerness to secure labour. The number of working hours should be limited to 11, it being left to the discretion or convenience of factory owners when to start and stop work, provided that they give notice to the factory inspector at the beginning of each month of their proposed arrangements, as they now do under the present Act regarding holidays If daylight working only is to be permitted, the working time will have to be varied according to the time of sun-rise and sun-set. If the time is to be legally fixed, it may be from 6 A.M. to 6 P M. But this will not admit of actual daylight working, for the full-time, on all days of the year. Two intervals of half an hour each should be allowed, the engines being stopped from 10 A.M. to 10-30 A M., and from 1-30 P.M. to 2 P.M. This would divide the day for recesses fairly well, and prevent to a great extent a large number of hands leaving their work and flocking out at frequent intervals. This, in itself, will be an advantage to employers, who now complain of the dawdling habits of the workpeople. The long hours are really the cause of such habits, rather than the effect. In the case of women we allow three recesses, one of half an hour at 9 A.M., another of three quarters of an hour at 12 noon, and a third of a quarter of an hour at 3 P.M., when they all go out, and therefore few require to go out at other times of the day I have no experience of the day-shift system; but I should say from 6 A M. to 9 P.M. would be more healthful to the workpeople than from 5 A.M. to 8 P M., as the legal working hours, provided that no adult male worked for more than 12 hours out of every 24 hours. I believe an hour in the morning is more likely to be enjoyed as a real rest than the same time in the evening, which might be wasted. I have not noticed any physical deterioration due to the illegal employment as adults of persons between the ages of twelve and fourteen. But it would be more to the point to check the illegal practices, where they exist, than to add to them by creating a new class of "young persons," and affording further opportunities for illegal employment If illegal practices cannot be checked in one case, they are likely to be doubled in the two cases. I can see no necessity for creating by law a special class of workers intermediate between the half-timers and the adult, and corresponding to "young persons" under the English Act, whose working hours should be restricted It is difficult and perplexing as it is to ascertain the ages of children between 9 and 14, and it will be much worse in the case of young persons. In England the birth certificates would greatly help the ascertainment of age. In India there are no such certificates and the appearance and physical characteristics of Indian children and youths are so varied that experienced medical men have often been misled as to their right age. It would be most difficult, if not impossible, to maintain a special register of all workers under the age of sixteen to facilitate inquiries as to the physical fitness of the youngest adults to work full time, for the reason that it is not possible to ascertain the age with any degree of accuracy or reliability. It would be mere guess work. The only guide will be the medical certificate of a half timer; but there would be other young persons over the age of 14 engaged who might never have worked as "children," or who might have come from other factories without any certificate. If an eleven hours day be fixed, half-timers would have to work only for $5\frac{1}{2}$ hours, and this would benefit them in their growing age. There would thus be less chance of physically unfit young persons having to work full-time, which, in itself, would also be reduced. The employment of women at night should be prohibited in large factories working throughout the year; but such a prohibition would cause hardship to poor women who only work in "seasonal" factories, such as ginning factories, and therefore this should be allowed. The minimum age at which children are allowed to work in factories need not be raised beyond nine. So far as my experience goes, nine-year old children do not find it a strain on their constitution to work half-time. They seem to be quite lively and active when leaving their work Not only so, but they have been noticed carrying loads for outside contractors at piece-work rates, which are a few cowries for each loads after they have left the mills. An eleven hours day in their case would further decrease their task inside the mills, as they would have only $5\frac{1}{2}$ hours to work. Instead of raising their age, it would be preferable to reduce their hours of works from 7 to $5\frac{1}{2}$ or 6 hours, according to whether an eleven or twelve hours day were legally fixed. Certificates of age should be required before children are allowed to work in factories. But there is such a difference of opinion among medical men themselves as to physical fitness that there is no likelihood of uniformity being observed in certifying it, and there is sure to be unnecessary annoyance and friction on this score. The age certificate may show that a child is physically fit or not; but it must be left to the discretion of the employer, or parent or guardian of the employee, whether the child shall be allowed to work or not. If a child certified to be physically unfit be prevented from employment in a factory, it is likely to be put to harder work outside, and for smaller remuneration It is unnecessary to require certificates of both age and physical fitness before children who have hitherto worked half-time are allowed to work full-time as adults. The certificates already granted to children should be considered sufficient. It should be prescribed by law that children should be employed in single sets. It

being compulsory under the present Act to give children half an hour's recess time, our rule is to have one set from 5 A.M. or after to 9 A.M., and from 4 P M., to 7 P M. or before, according to starting and stopping time of the engines during long or short days as the case may be, and another set from 9 A.M. to 12 noon, and from 12-30 P.M. to 4 P.M. The two sets exchange their hours of attendance about once a fortnight, usually after a stop day. Factory owners should not be obliged to provide elementary education at their own expense, for children working in their factories. Irrespective of the expense, it may cause friction if children are compelled to attend school before or after their work is done, and it may lead to illegal employment also, unless it be clearly laid down that the school shall be outside the factory premises. Government are contemplating free primary education, and if this be done, the expense of maintaining a school need not fall on the factory owners. Non-working young children should be prohibited from accompanying workers to dangerous or unhealthy parts of factories. An enclosure within the mill compound may be provided for them, with a matron to look after them, but it is likely that caste prejudices may come in the way of the employment of a matron. Simple practical rules which can be easily carried out by managers of factories, such as a fan to move so many cubic feet of air per minute for a certain area, should be prescribed to secure satisfactory ventilation. There is less probability of the air being vitiated in Indian factories than in the English, the sun being a powerful agent of purification here. If the examination of air be left to scientists, there may be no end to minutely defined rules which cannot be practically carried out. We ventilate our factories by means of propeller fans drawing in air from the top of chimneys specially built for the purpose, and propelling and distributing it in rooms through tunnels made in the floor covered over with perforated boards, or through overhead pipes having openings at certain distances. There is no necessity in India for prescribing a standard of moisture for the air in factories. It would be impossible to infuse too much steam, if steam be used, without making the factory intolerably hot, and this neither factory-owner nor mill operatives will find beneficial. Nor will too much water be found to be beneficial. In this matter, the Indian conditions are quite different from those of England; and factory owners had better be left to look to their own interests. Our climate being extremely dry, we humidify the air which is propelled for ventilation by means of water-jets forced through nozzles at a high pressure, and are thus able to obtain not only the required moisture, but to cool the temperature of the rooms by about 18 to 20° on hot days. A fair standard of purity for the water used for humidifying purposes may be fixed, but the fear is that if left to scientists it may be carried to extremes, and unnecessary trouble and expense caused to factory owners. The water usually used by the factories is not likely to be found so injurious to the health of the operatives as to require a special provision in the Act prescribing a standard of purity to ensure its being reasonably pure. No necessity has been found to exist for the standard of latrine accommodation being raised from one seat for every 50 workers to one for 25 workers. Actual observations were made and it was found that latrines remained vacant at intervals; and that even if all the 50 persons used a seat in a day of 12 hours, it would give each person 14½ minutes, which is really too long a time, less than 5 minutes being usually taken. It was also ascertained that half the workers had answered the calls of nature before coming to the mills. They had no cause to complain of any inconvenience. Besides the latrines, urinals and smoking accommodation are provided. Even if increased accommodation were provided, it is not to be supposed that larger numbers of hands would be allowed to leave their work at one and the same time. It would only cause useless expenditure and unnecessary occupation of valuable land. In the case of small factories, employing say about 100 persons, one seat for 25 persons would be necessary, as one or two seats would obviously be insufficient.

M. Bazanji Dadaphoy.

The Central Provinces and Berar Government have, however, introduced a rule recently raising the accommodation to one seat for 35 persons. All doors of working rooms should be hung so as to open readily from the inside outwards in case of fire. I am not aware that further precautions for fencing machinery are necessary. From time to time, as experience suggests, new guards have, at the instance of factory inspectors, or of the mill owners themselves, been provided. It is absolutely necessary that arrangements should be made to secure uniformity in the administration of the Factory Act throughout India. All rules should be issued through a central authority, even though local conditions may require special treatment. In fact, all inspectors should be under one special head, under whose sanction all orders should be passed, and to whom appeals could be made against any orders passed by the local inspectors. It has been found in practice that each inspector has his own ideas about fencing machinery, and other matters, and frequent changes or additions have to be made to satisfy his requirements. This would be avoided if all orders could be passed through the central authority. It has only recently been revealed to the Commission how half-timers have been illegally employed on whole time in Cawnpore and Agra, and even in the capital city of Calcutta, with the full knowledge of all the authorities concerned. This would not have occurred if a central authority had administered the Factory Act. I believe that in Calcutta, and probably in all Bengal and the United Provinces, the cleaning of machinery is considered as repairs, and is allowed to be done on Sundays and holidays, while a Bombay mill was rightly prosecuted for this under the Act, and it is strictly prohibited in Bombay and in these Provinces. Another instance is that, while throughout India the latrine accommodation is one seat for 50 persons, in the Central Provinces and Berars a rule has recently been introduced requiring one seat for every 35 persons. When such different practices are permitted, absolute injustice is done to those who submit to strict rules, and who are competitors in the same line of business with those who work under easier conditions. There does not seem to be any necessity for full-time medical inspectors of factories. The factory inspectors should be sufficiently competent to secure the due observance of the Act. They may consult the Civil Surgeons on any sanitary points they may have a doubt about. But when once a year or so the sanitary conditions of a factory have been inspected by a medical officer, he would have nothing further to do to assist the inspectors, who would be guided by such rules as the Civil Surgeons or health officers might lay down from time to time. Besides, if a full-time medical officer be appointed, say in these Provinces, he may not be available for the examination of children as required by the employers, and the children would have to work in factories for some time without certificates. In cities like Bombay and Calcutta, with their suburbs, it may be necessary to employ full-time medical officers.

Pazanji Dadabhoy

STATEMENT A.—*Showing the number of hours wroked* per *month, and the number*

Year.	January.			February.			March.			April.			May.			June.			July.		
	Days.	Hours.	Minutes.	Days.	Hours.	Minutes.	Days.	Hours.	Minutes.	Days.	Hours.	Minutes.	Days.	Hours.	Minutes.	Days.	Hours.	Minutes.	Days.	Hours.	...
1897	26	286	20	24	277	26	27	323	39	26	328	45	26	342	59	25½	339	28	27	351	
1898	26	290	9	24	275	56	27	320	26	26	328	42	26½	346	50	25	329	5	26	336	
1899	26	290	21	25	288	44	26	310	4	25	309	42	26½	345	21	26	344	2	26	337	
1900	27	299	20	24	277	46	27	323	58	26	328	19	26	339	37	26	344	6	26	338	
1901 .. .	25	278	33	24	274	52	26	310	3	25½	320	21	27	354	21	25	331	20	27	351	
1902 ...	27	298	11	24	273	46	26	305	25	25½	318	3	26	337	36	26	342	50	27	345	
1903	27	291	11	23	259	23	27	318	31	25	311	55	27	347	26	26	339	59	27	350	
1904	26	287	40	26	295	45	25	293	5	26	328	41	25	323	36	26	341	24	27	351	
1905	26	286	20	24	270	6	25½	299	4	25	318	52	27	354	14	26	341	32	26	336	
1906	27	295	3	24	272	58	26½	312	35	25	299	1	27	348	10	26	339	27	26	328	
1907	26	284	3	22½	250	27	27	318	9	26	318	11	27	350	43	25	324	33	27	339	
Total ...	289	3,187	11	264½	3,016	9	290	3,435	...	281	3,510	32	291	3,790	53	292½	3,717	40	292	3,767	
Average working hours *per* day including cleaning time.	...	11	1	...	11	24	...	11	51	...	12	29	...	13	1	...	13	9	...	12	

Number of days during which the mills worked

1897	24	26	26	26
1898	23	26	25	26
1899	20	26	26	26
1900	22	26	26	26
1901	18	27	25	27
1902	14	26	26	27
1903	15	26	26	27
1904	22	25	26	26
1905	15	27	26	26
1906	10	27	26	25
1907	5	27	25	24

...s during which the mills were worked for 12½ hours and over, during the last 11 years.

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August.		September.			October.			November.			December.			Total.			Per day.		Remarks.
Hours.	Minutes.	Days.	Hours.	Minutes.	Days.	Hours.	Minutes.	Days.	Hours.	Minutes.	Days.	Hours.	Minutes.	Days.	Hours.	Minutes.	Hours.	Minutes.	
325	8	26	314	31	25	301	48	26	290	32	27	297	1	311½	3,839	24	12	25	
340	7	26	316	52	26	306	16	25	281	36	27	298	18	311½	3,771	16	12	6	
345	52	26	316	29	27	317	42	24	272	30	26	287	30	310½	3,766	14	12	7	
340	34	26	316	...	26	305	55	26	294	47	27	297	40	314	3,806	10	12	7	
338	19	25	302	19	27	312	28	25	278	32	26	278	11	309½	3,760	38	12	9	
339	0	26	310	40	24	276	29	26	286	19	27	288	23	311½	3,723	2	11	57	
327	8	26	315	29	26	301	54	25	280	38	27	297	32	313	3,749	25	11	59	
317	27	26	311	3	26	300	52	25	278	16	27	296	27	311	735	29	12	...	
325	11	26	310	59	26	305	45	26	288	9	26	282	54	309½	3,719	17	12	1	
333	10	23½	280	9	27	311	30	26	284	34	27	289	3	311½	3,694	23	11	50	
319	28	27	319	31	25	281	6	25	275	53	27	293	48	310½	3,674	55	11	50	
,662	12	293½	3,414	2	285	3,411	45	279	3,111	46	294	3,205	47	3,423½	41,261	13	12	3	
12	32	...	12	3	...	11	58	...	11	9	...	10	54	...	...	...	...	...	

...ver 12½ hours (actual) per *day.*

..	127
...	126
5	129
...	127
...	114
...	112
...	116
1	123
1	113
...	103
...	82

Mr. Bazanji Dadabhoy.

STATEMENT B.—Average pro

No. 6*s* TWIST

—	1897.		1898.		1899.		1900.		1901.		1902.	
	Average hours worked *per* day	Production *per* hour.	Hours worked.	Production *per* hour.	Hours worked.	Production *per* hour.	Hours worked.	Production *per* hour.	Hours worked.	Production *per* hour.	Hours worked.	Production *per* hour.
		Ozs.		Ozs.		Ozs.		Ozs.		Ozs.		Ozs.
January ...	10·785	2 823	10·89	3 260	10·92	3·257	10·78	2·737	10 93	3·664	10 70	3 094
February ...	11·089	2·907	11·31	3 239	11·34	3·338	11·32	2·653	11·16	3 024	11·12	3 131
March ...	11·688	3·267	11·67	3 198	11 65	3·250	11 70	2 736	11·65	2 828	11 47	3 066
April ...	12·330	3·179	12·36	3 407	12·33	3 236	12 44	2·656	12 29	2·549	12·19	2 932
May ...	12·880	3 075	12·82	3·188	12 78	3·103	12·81	2 978	12·80	2 706	12 64	2 962
June ...	12·990	3 308	12 85	3·100	13 03	3·160	12·97	2 939	13·96	2·654	12 91	2 888
July ...	12 84	3·093	12 69	3 200	12 75	3 230	12 74	2 966	12 68	2 647	12 64	3 011
August ...	12 24	2·609	12 35	3·202	12 60	3 097	12 35	2 879	12·27	2 940	12 32	3 049
September ...	11 89	2 759	12 38	3 194	11 97	3·135	11·88	2 950	11·82	2 959	11 67	2 993
October ...	11 52	3 286	11 50	3·349	11 57	3 349	11 49	3 100	11·33	2 975	11 29	3 101
November ...	10·96	3 190	11·60	3 407	11·09	3 225	11·04	2 960	10 97	3 200	10 80	2 987
December ...	10·75	3·211	10 79	3 289	10·79	2 612	10·76	2 860	10 66	3 383	10 42	3 062

No 16*s* TWIST

January ...	10 785	1 093	10 89	1 006	10 92	1 030	10 78	1·007	10 93	·992	10 70	973
February ..	11 089	1 148	11·31	1 079	11 34	1 066	11·32	1 007	11 16	1·028	11 12	1 019
March ...	11·688	1 115	11 67	1 069	11·65	1·039	11 70	1 007	11·65	·985	11·47	1 011
April ...	12 330	1 120	12 36	1 036	12 33	1 014	12 44	1 011	12·29	·943	12 19	·976
May ...	12·880	1 039	12·82	1 045	12·78	·944	12·81	1 018	12·80	1·025	12 64	·963
June ...	12·990	1 089	12 85	·993	13·03	1 040	12 97	1·029	12 96	·992	12 91	·974
July ...	12·84	1·084	12 69	·996	12·75	1·007	12 74	0 978	12·68	9·66	12·64	·975
August ...	12·24	0 998	12·35	1·006	12·60	1 031	12·35	·989	12·27	1·002	12 32	·989
September ...	11·89	1·023	12 38	0 975	11·97	1 021	11·88	·971	12 82	·996	11 67	1·039
October ...	11·52	1 064	11·50	1·035	11·57	·984	11 49	·964	11 33	·999	11 29	·978
November ...	10·96	1 040	11·60	1·032	11 09	·992	11·04	·962	10 97	1·029	10·80	1·078
December ...	10·75	1·122	10·790	1·038	10·79	·996	10·76	1·000	10·66	1·031	10·442	1·053

tion per *spindle* per *hour*.

Mr. Pasa Dadabhoy.

.LING.

1903.		1904.		1905.		1906.		1907.		Remarks.
urs ked	Production *per* hour.	Hours worked	Production *per* hour.	Hours worked.	Production *per* hour.	Hours worked.	Production *per* hour.	Hours worked.	Production *per* hour.	
	Ozs.		Ozs.		Ozs.		Ozs.		Ozs.	
53	3 35	10 86	2 814	10 68	2·450	10 64	2 589	10 64	2·035	
92	3 213	11·10	2 697	11 03	2 338	11 05	2 440	10·77	2 466	
49	2·951	11·38	2 593	11·54	2 221	11 49	2·164	11 50	2 658	
22	2 687	12·37	2 577	12 44	2 142	11 72	2 379	11 96	2 356	
67	2 738	12 66	2·200	12 80	2 239	12 60	2 32	12 69	2 578	
75	2·740	12·86	2 265	12 83	2·445	12·74	2 415	12 66	2 514	
72	2·777	12 67	2·338	12·60	2 375	12 43	2 345	12 26	2 559	
33	2·781	12 33	2·165	12·34	2 479	12 04	2 473	12 02	2 466	
92	2·919	11·69	2·351	11·75	2 444	11 70	2·511	11 59	2 661	
17	2·834	11·30	2 595	11·37	2 375	11·24	2 606	11 22	2 701	
17	2 650	11·04	2 479	10 78	2 116	11 67	2 108	10 85	2 793	
16	2·689	10 72	2·492	10 57	2·155	10 45	2 192	10 38	2 802	

LING.

3	·979	10 86	1·004	10 68	879	10·61	·803	10 64	·766	
2	·941	11·10	936	11·03	·850	11 05	·830	10 77	·736	
9	·909	11·38	·875	11 54	·801	11·49	·778	11 50	·745	
2	·884	12 37	·846	12 44	802	11·73	·756	11 96	·783	
7	·985	12 66	·843	12 80	·827	12 60	·707	12 69	·740	
5	·955	12·86	·850	12·83	·867	12 74	·768	12 66	·770	
2	·964	12·67	·875	12·60	·834	12·43	·711	12 26	·738	
3	1·056	12 33	·848	12 34	871	12 04	·738	12 02	·775	
3	1·063	11·69	·884	11·75	·723	11·70	·748	11·59	·750	
7	1·018	11·30	·874	11 37	·736	11 24	·725	11·22	·760	
7	1 032	11·04	·889	10·78	·718	10 67	·778	10 85	·781	
3	1·034	10·72	·829	10 57	·739	10 45	·764	10·38	·803	

Mr. Bazanji Dadabhoy.

STATEMENT B.—Average production

No. 10s TWIST

—	1897.		1898.		1899.		1900.		1901		1902.	
	Average hours worked *per* day	Production *per* hour	Hours worked.	Production *per* hour.	Hours worked.	Production *per* hour.	Hours worked.	Production *per* hour.	Hours worked.	Production *per* hour.	Hours worked.	Production *per* hour.
		Ozs.		Ozs.		Ozs.		Ozs.		Ozs.		Ozs.
January ...	10·785	1·620	10 89	1·585	10 92	1 728	10·78	1·701	10 93	1·693	10 70	1·621
February ...	11·089	1 619	11·31	1·697	11·34	1 681	11·32	1 691	11·16	1 604	11 12	1·597
March	11·688	1·765	11 67	1·664	11 65	1 602	11·70	1·716	11 65	1 687	11·47	1·539
April	12 330	1·654	12 36	1 643		1 688	12·44	1·689	12 29	1 613	12 19	1·521
May	12·880	1 620	12·82	1 569	12·78	1·592	12 81	1 641	12 80	1·593	12 64	1·520
June	12·990	1·663	12 85	1·645	13 03	1 668	12 97	1·663	12·96	1·553	12 91	1·503
July	12·84	1·704	12 69	1·627	12·75	1 659	12·74	1 595	12 68	1 611	12·64	1·535
August	12·24	1·568	12	1·665	12 60	1 714	12 35	1·599	12·27	1·679	12 32	1·554
September ...	11·89	1·611	12·38	1·601	11·97	1·748	11·88	1·585	11 82	1 622	11·67	1·519
October	11·52	1·640	11·50	1 628	11·57	1·673	11 49	1 593	11·33	1·572	11·29	1 571
November ...	10·96	1·585	11·60	1 703	11 09	1 719	11·04	1 664	10 97	1·625	10 80	1·592
December ...	10 75	1·613	10·79	1·674	10 79	1·718	10 76	1·670	10 66	1 612	10·42	1·660

No. 20s TWIST

January ...	10·785	·785	10·89	·760	10 92	·704	10 78	·723	10 93	·678	10 70	·693
February ...	11·089	·825	11·31	·755	11 34	725	11·32	·737	11·16	·655	12·12	·701
March	11·688	·777	11 67	·750	11·35	·717	11 70	·739	11·65	·703	11 47	·660
April	12 330	·805	12·36	·738	12 33	·714	12 44	·732	12 29	·651	12 19	·671
May	12·880	·772	12 82	·720	12·78	·701	12 81	·724	12 80	·657	12·64	·683
June	12 990	·795	12·85	·719	13 03	·725	12 97	7 22	12 96	·664	12 91	·696
July	12 84	·781	12·69	·697	12·75	·712	12 74	·670	12·68	·669	12·64	·686
August	12 24	·696	12 25	·702	12·60	·715	12 35	·677	12·27	·666	12·32	·702
September ...	11 89	·709	12·38	·694	11·97	·710	11 88	·670	11 82	·666	11·67	·696
October	11 52	·725	11·50	·727	11·57	·710	11·49	·665	11·33	·697	11·29	·705
November ...	10 96	736	11 60	·741	11 09	·733	11·04	·680	10·97	·709	10·80	·716
December ...	10·75	·780	10·79	·755	10 79	·714	10 76	·705	10·66	·700	10·42	·760

indle per *hour*—concld.

Mr. Bazanji Dadabhoy.

ING.

1903.		1904.		1905.		1906.		1907.	
Production *per* hour.	Hours worked	Production *per* hour.	Hours worked.	Production *per* hour.	Hours worked	Production *per* hour.	Hours worked.	Production *per* hour.	
Ozs.		Ozs.		Ozs.		Ozs.		Ozs.	
1 616	10·86	1·537	10 68	1·520	10 64	1·524	10 64	1 585	
1·594	11·10	1·537	10·03	1·489	11·05	1·496	10 77	1·528	
1·591	11·38	1·425	11·54	1·357	11·49	1·397	11·50	1 547	
1 539	12 37	1·421	12 44	1·378	11·72	1·421	11 96	1·540	
1·550	12 66	1·381	12·80	1·420	12 60	1·456	12 69	1·555	
1·531	12 86	1·420	12 83	1·495	12·74	1·399	12 66	1·613	
1·510	12 67	1·409	12·60	1·443	12 43	1·396	12 26	1 53	
1·542	12·33	1·474	12 34	1·516	12·04	1·502	12 02	1·557	
1·549	11·69	1·480	11 75	1·467	11·70	1·473	11·59	1·603	
1·545	11·30	1·523	11·37	1·507	11·24	1·502	11·22	1·594	
1·550	11·04	1 548	10·78	1·498	11 67	1·658	10·85	1·644	
1·578	10 72	1·512	10 57	1 520	10 45	1·605	10 38	1·663	

NG.

724	10·86	·635	10·68	·644	10 64	·629	10 64	·615
·735	11·10	·622	11·03	·677	11 05	·610	10 77	·563
·709	11·38	·610	11·54	·656	11·49	·556	11·50	·578
682	12·37	·570	12 44	·625	11 72	·560	11·96	·613
·719	12·66	·585	12 80	·625	12·60	·542	12·69	·598
724	12 86	·645	12·83	·714	12·74	·594	12 66	·599
·672	12·67	·646	12·69	·628	12·43	·547	12 26	·571
·702	12 33	·631	12 34	·626	12·04	·567	12 02	·602
·714	11·69	·641	11 75	·604	11·70	·566	11·59	·615
·702	11·30	·663	11 37	·655	11·24	·571	11 22	·635
·728	11·04	·651	10 78	·647	11 67	632	10 85	·648
·725	10·72	·665	10·57	·643	10 45	·600	10·38	·658

Mr. Bazanji Dadabhoy.

STATEMENT C.—Production per *spindle* per *hour* (*eleven years' average*).

No. 6*s* Twist Reeling.

11 hours a day.			12 hours a day.			13 hours a day.		
Month.	Average hours worked.	Production *per* hour.	Month.	Average hours worked.	Production *per* hour.	Month.	Average hours worked.	Production *per* hours.
		Ozs.			Ozs.			Ozs.
January	10·76	2·827	March	11·57	2 812	May	12 71	2 743
February	11·13	2·858	April	12 24	2 736	June	12 87	2 771
November ...	10·97	2 829	August	12 28	2 740	July	12 64	2 777
December ...	10·64	2·827	September ...	11·84	2 807	.....	...	...
			October	11 39	2 934	.....	...	...
Total ..	43 50	11·341	Total ...	59 32	14·029	Total ..	38 25	8 290
Average ...	10 87	2·835	Average ...	11·86	2 806	Average ...	12 75	2 760

No. 16*s* Twist Reeling.

11 hours a day.			12 hours a day.			13 hours a day.		
Month.	Average hours worked.	Production *per* hour.	Month.	Average hours worked.	Production *per* hour.	Month.	Average hours worked.	Production *per* hour.
		Ozs.			Ozs.			Ozs.
January	10·76	·957	March	11·57	·939	May	12·74	·921
February	11·13	·966	April	12·24	·925	June	12 87	·939
November ...	10·97	·939	August	12 28	·937	July	12 64	·921
December	10·64	946	September ...	11 84	·927	.....	...	...
			October	11·39	·922	.....	...	...
Total ...	43 50	3 808	Total ...	59 32	4 650	Total ...	38 25	2·781
Average ...	10·87	·952	Average ...	11·86	·930	Average ...	12 75	·927

STATEMENT C.—concld.

Mr. Bazanji Dadabhoy.

No. 10*s* Twist Reeling.

11 hours a day.			12 hours a day.			13 hours a day.		
Month.	Average hours worked.	Production *per* hour.	Month.	Average hours worked.	Production *per* hour.	Month.	Average hours worked.	Production *per* hour.
		Ozs.			Ozs.			Ozs.
... ...	10·76	1·612	March	11·57	1 572	May ...	12·74	1·536
... ...	11·13	1·594	April	12·24	1·555	June	12·87	1·559
... ...	10 97	1·616	August	12 28	1·579	July	12 64	1 548
... ...	10·64	16·20	September	11 84	1 569			
			October	11·39	1·577			
Total ...	43·50	6·442	Total ...	59 32	7·852	Total ...	38 25	4·643
Average ...	10·87	1·610	Average ...	11·86	15·70	Average ...	12·75	1 548

No. 20*s* Twist Reeling.

11 hours a day.			12 hours a day.			13 hours a day.		
Month.	Average hours worked.	Production *per* hour.	Month.	Average hours worked.	Production *per* hour.	Month.	Average hours worked.	Production *per* hour.
		Ozs.			Ozs.			Ozs.
... ...	10·76	·696	March	11·57	·678	May	12·74	·666
... ...	11·13	·691	April	12 24	·669	June	12·87	·691
... ...	10·97	·693	August	12 28	·662	July	12 64	·662
... ...	10·64	·700	September	11·84	·662			
			October	11·39	·678			
Total ...	43·50	2·779	Total ...	59 32	3 349	Total ...	38 25	2·019
Average ...	10 87	·695	Average ...	11·86	·60	Average ...	2·75	·673

Mr. Razanji Dadabhoy.

STATEMENT D.—Showing ten years' averages of total yarn produced, and total waste made from carding to spinning point (1898 to 1907).

Month.	Average hours worked per day.	Total yarn produced.	Total waste carding to spinning	Percentage of waste on yarn produced.	Remarks.
		11 hours' day.			
January	10 76	937,274	113,739	12 13	
February	11·13	864,537	105,469	12·19	
November	10 97	882,833	107,934	12 22	
December	10 64	928,536	112,853	12·15	
Total ...	43·50	3,613,180	439,995	...	
Average ...	10·87	903,295	109,999	12 17	
		12 hours' day.			
March	11·57	933,687	116,208	12·44	
April	12 24	923,805	114,391	12·39	
August	12 28	1,041,473	148,206	14 23	
September	11·84	956,872	134,766	14 08	
October	11 39	915,107	118,744	22 97	
Total ...	59·32	4,769,944	632,315	...	
Average ...	11·86	953,989	126,463	13,25	
		13 hours' day.			
May	12·74	957,928	119,913	12 51	
June	12 87	993,817	132,904	13·37	
July	12·64	1,057,663	153,271	14 49	
Total ...	38 25	3,009,408	406,088	...	
Average ...	12·75	1,003,135	135,363	13·49	

STATEMENT E.—*Showing the number of employés, &c., in the different departments.*

Mr. Basanji Dadabhoy.

Department.	Adults.		"Young Persons" between 14 and 16.		Half-timers.		Total.	Percentage of young persons in different departments.
	Men.	Women.	Men.	Women.	Boys.	Girls.		
ENGINE DEPARTMENT.								
e								
ng	212	...	...	...	...	...	212	...
nic Shop								
lry								
oolies	21	...	...	...	...	...	21	...
	233	...	...	...	...	...	233	...
SPINNING DEPARTMENT.								
g	5	20	...	...	...	...	25	...
ding	66	...	...	...	...	...	66	...
... ...	99	8	...	...	...	...	107	...
coverer	23	...	...	...	...	...	23	...
... ...	361	...	49	...	135	...	545	13·58
frame	673	...	238	...	535	...	1,446	35·37
ng	51	...	2	...	...	...	53	4
g	34	457	...	70	...	150	711	15·31
l spinning	21	36	...	...	...	3	60	...
	1,333	521	289	70	670	153	3,036	...
WEAVING DEPARTMENT.								
ng	2	149	...	7	...	6	164	...
ng	38	...	...	...	...	...	38	...
... ...	59	10	...	...	...	...	69	...
rs and Reachers	53	...	32	...	90	...	175	18·28
... ...	15	...	...	...	...	...	15	...
g	32	11	7	...	...	...	50	16·3
ng	1,326	...	13	...	...	...	1,339	1·00
	1,525	170	52	7	90	6	1,850	...
DYEING AND BLEACHING.								
r	152	122	4	7	2	4	291	3·74
ding	66	31	2	...	...	...	99	1·00
	218	153	6	7	2	4	390	...

Mr. Bazanji Dadabhoy.

STATEMENT E—concld.

Departments.	Adults.		"Young Persons" between 14 and 16.		Half-timers.		Total.	Percentage of young persons in different departments.
	Men.	Women.	Men.	Women.	Boys.	Girls.		
Total brought forward ...	3,309	844	347	84	762	163	5,509	
MISCELLANEOUS.								
Building	29	5	...	...	...	...	34	
Carpenter	2	...	...	...	...	...	2	
Cotton coolies	109	...	...	...	...	...	109	
Sweepers, Wastepickers	23	119	...	...	...	...	142	
Cleaners	95	...	...	...	...	...	95	
Store	5	...	...	...	...	...	5	
	263	124	...	...	...	...	387	
Grand Total ...	3,572	968	347	84	762	163	5,896	
Per cent.	60·08	16·42	5·82	1·41	12·29	2·74	...	
	EMPLOYÉS IN THE GINNING FACTORIES.							
Nagpur Ginning Factory	19	44	...	...	...	...	6	
Hinganghat ,, ...	77	35	...	...	...	...	112	
Wardha ,, ...	49	26	...	...	...	...	75	
Warora ,, ...	82	44	...	...	...	...	126	
Akola	51	25	...	...	...	...	76	
Yeotmal	61	36	...	...	...	...	97	

TEMENT F.—Showing the attendance of work people in September 1905, May 1907 and October 1907.

SEPTEMBER 1905.

Number of days present.	26	25	24	23	22	21	20	19	18	17	16	15	14	13 and under.	Total.
... ...	1,274	501	408	277	239	192	169	118	113	85	72	71	50	301	3,870
Per cent.	32·92	12 95	10·54	7·16	6 18	4 96	4 36	3·05	2 92	2·20	1·86	1·83	1·29	7 78	
... ...	154	131	111	70	62	34	36	21	13	12	11	6	5	68	734
Per cent.	20·98	17 85	15 12	9·53	8·45	4 63	4 91	2 86	1·78	1·63	1·50	·82	·68	9 26	
... ...	521	90	36	19	15	10	11	7	8	13	5	2	1	43	781
Per cent.	66 70	11·52	4 61	2 43	1·92	1 28	1·41	·90	1·03	1·67	·64	·26	·13	5 50	
Total ..	1,949	722	555	366	316	236	216	146	134	110	88	79	56	412	5,385
Per cent.	36·19	13·40	10·31	6·80	5·87	4·38	4·01	2·71	2·50	2·04	1·63	1 47	1·04	7 65	

MAY 1907.

Number of days present.	27	26	25	24	23	22	21	20	19	18	17	16	15	14 and under	Total.
... ...	822	351	283	251	232	188	161	119	108	83	104	74	84	569	3,429
Per cent.	23·97	10 23	8·24	7·31	6 76	5·48	4 68	3·47	3·14	2·42	3·03	2 25	2 44	16 58	
... ...	164	112	104	69	58	44	46	45	30	19	20	23	14	172	920
Per cent.	17·83	12 17	11·30	7·50	6 31	4 78	5 00	4·89	3 26	2·07	2 17	2 50	1·52	18·70	
... ...	328	84	52	34	30	29	20	21	24	18	30	27	27	106	830
Per cent.	39·52	10·12	6 27	4·10	3 61	3 49	2·41	2 53	2 90	2·17	3·61	3 25	3 25	12·77	
Total ...	1,314	547	439	354	320	261	227	185	162	120	154	124	125	847	5,179
Per cent.	25·37	10·56	8·48	6·84	6·18	5 04	4 38	3 57	3·13	2 32	2 97	2·40	2·41	16·35	

OCTOBER 1907.

Number of days present.	25	24	23	22	21	20	19	18	17	16	15	14	13 and under.	Total.
... ...	1,347	435	364	247	152	168	126	106	85	65	59	40	557	3,752
Per cent.	35·90	11·59	9 70	6 58	4 05	4·49	3 36	2·82	2 29	1·74	1·59	1 07	14 85	
... ...	244	160	114	70	59	34	19	22	14	11	13	14	129	903
Per cent.	27·02	17 71	12·62	7·75	6·53	3 76	2·10	2·43	1·55	1·21	1 43	1 55	14 28	
... ...	545	100	43	28	29	12	13	10	7	17	8	6	93	916
Per cent.	59·49	10·91	5·24	3·05	3·16	1·31	1·41	1 09	·76	1 85	·87	·65	10 15	
Total ..	2,136	695	526	345	240	214	158	138	107	93	80	60	779	5,571
Per cent.	38 34	12 47	9 44	6 19	4·30	3 84	2 83	2·47	1 92	1 63	1 43	1·07	13·98	

Mr. Basanji Dadabhoy.

STATEMENT G.—Showing the maximum and minimum wages of employés in the different departments.

	Men.		Women.		Children.	
	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Engine Department.						
Engine oiler	9 0 0	15 0 0	...	...	...	...
„ fireman	9 0 0	10 0 0	...	...	...	...
Boiler cleaner	8 8 0	...	...	...	...	...
Fire coolies	8 8 0	...	...	...	...	...
Mechanic coolies	8 0 0	10 0 0	...	...	...	...
Blacksmith shop coolies	8 8 0	...	...	...	...	...
Shafting oiler	9 0 0	10 0 0	...	...	...	...
Moulder	12 0 0	15 0 0	...	...	...	...
Moulding coolies	8 0 0	...	...	...	...	...
Coal „	8 0 0	10 8 0	...	...	...	...
Spinning Department.						
Mixing	7 0 0	8 0 0	5 0 0	5 8 0	...	...
Bonus for regular attendance	0 8 0	...	0 8 0	...	...	...
Blow Room	7 8 0	10 0 0	...	...	...	...
Bonus for regular attendance	1 0 0	...	...	...	...	...
Card	7 0 0	12 0 0	...	...	...	...
Frame Tenters	8 0 0	15 0 0	...	...	...	...
„ Doffers	6 0 0	...	...	...	3 0 0	3 8 0
Bonus	0 8 0	...	...	...	0 8 0	...
Ring Frame-siders	7 0 0	10 8 0	...	...	4 0 0	...
Bonus	1 0 0	...	...	...	1 0 0	...
„ Doffers	6 8 0	7 0 0	...	...	3 8 0	4 0 0
Bonus	0 8 0	...	...	...	0 8 0	...
Spinning oilers and Banding coolies	7 0 0	10 8 0	...	...	...	...
Bonus	0 8 0	to 1 0 0	...	...	...	...
Reelers	6 8 0	10 0 0	4 0 0	10 0 0	2 8 0	...
Bonus	0 8 0	...	...	...	...	...
Thread Spinning Winder	...	...	5 0 0	...	...	...
„ Polisher	8 0 0	...	...	...	...	...
„ Doubler	7 0 0	8 0 0	...	...	...	...
Bonus	1 0 0	...	...	...	...	...

Statement G—concld.

Mr. Bezanji Dadabhoy.

	Men.		Women.		Children.	
	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
ıd Spinning Doubling M. Tenter ...	...	...	5 8 0	...	...	...
lers	7 0 0	12 0 0	...	...	...	...
s	8 0 0	11 0 0	...	...	...	...
ionus	1 0 0	...	...	...	...	...
Weaving Department.						
ing	...	...	4 0 0	8 0 0	2 8 0	...
ers	7 0 0	17 0 0	...	...	...	...
r	8 0 0	15 0 0	5 0 0	7 8 0	...	...
ionus	1 0 0	...	1 0 0	...	...	...
ers and Reachers	7 0 0	13 0 0	...	...	3 0 0	...
s to Reachers	1 0 0	...	...	...	0 8 0	...
ers	7 0 0	22 0 0	...	...	...	...
rs	7 0 0	12 0 0	6 0 0	7 0 0	...	...
ionus	1 0 0	...	1 0 0	...	...	...
Dyeing and Bleaching Department.						
... ...	7 0 0	12 0 0	5 8 0	6 0 0	2 8 0	...
hers	...	...	...	...	...	...
o Dyers	9 0 0	12 0 0	6 0 0	...	...	...
Bonus to women	...	...	0 8 0	...	...	...
Miscellaneous.						
Coolies	7 0 0	9 0 0	...	...	...	...
nters	20 0 0	30 0 0	...	...	...	...
ling coolies	8 0 0	11 8 0	4 0 0	5 0 0	...	...
ellaneous cleaners	7 0 0	9 8 0	...	...	...	...
pers	5 0 0	5 8 0	...	...	...	...
engers	7 0 0	8 0 0	6 0 0	6 8 0	...	...
on pickers	...	...	4 0 0	5 0 0	...	...
coolies	9 8 0	14 8 0	...	...	...	...
lers	8 0 0	13 0 0	...	...	...	...
r makers	8 0 0	13 0 0	...	...	...	...
at grinders	8 0 0	12 0 0	5 0 0	6 0 0	...	...
Bonus	1 0 0	...	1 0 0	...	...	...

Mr. Bazanji Dadabhoy.

STATEMENT H.—Showing the monthly average attendance of hands from April 1906 to December 1907.

Month.	Year.	Present.	Absent.	Total on the muster roll.	Percentage of	
					Present.	Absent.
April		3,502	1,481	4,983	70 38	29·72
May	,,	3,725	1,120	4,845	76·88	23·12
June	,,	3,198	892	4,090	78·19	21·81
July	,,	4,527	575	5,100	88·76	11·24
August	,,	4,550	574	5,124	88 80	11·20
September	,,	4,381	727	5,108	85·77	14·23
October...	,,	4,481	1,032	5,513	81 28	18 72
November	,,	4,532	982	5,514	82·19	17·81
December	,,	4,567	927	5,494	83 13	16·87
January	1 907	4,512	934	5,446	82·85	17·15
February	,,	4,551	906	5,457	83 40	16·60
March	,,	4,401	1,004	5,405	81·42	18 58
April	,,	4,503	995	5,498	81·90	18·10
May	,,	4,188	1,178	5,366	78·05	21·95
June	,,	4,483	989	5,472	81·93	18 07
July	,,	4,868	934	5,802	83·90	16·10
August	,,	4,948	968	5,916	83·64	16·36
September	,,	4,760	1,037	5,797	82·11	17·89
October...	,,	4,828	1,053	886	82·03	17·97
November	,,	4,842	1,117	5,959	81 22	18·78
December	,,	5,074	1,09	6,170	82·24	17·76

Mr. B. Dadabhoy. *Oral evidence.*

Witness stated that he had been connected with the Empress Mills for 31 years; he had also visited English mills. He had tried night and day working, but gave up the experiment as unsatisfactory. He could not explain why there was as much loitering in the short day as in the long day. Probably the hands had got into the habit, and nothing would cure them except a rearrangement of hours. He considered that the operatives attained a certain degree of skill, and then went no further. While they were at work they worked steadily; they had to go out for intervals of rest on account of the long hours. He objected to the fixed 12-hour day, because in the short day they would have to work by artificial light, and this did not conduce to good work. He preferred daylight working; and the operatives did so too, as they did not like being kept in the mill after dark. Some of them lived a distance of three miles from the mill. Most of the factories in India worked by natural light, and once the electric light was introduced, there was the constant temptation to work longer hours. If the hands had the option, they would chose daylight working in preference to a fixed 12-hour day. They had electric light in the offices and dyeing and bleaching departments, but not in the mill. He thought that, to some extent, a fixed 12-hour day would help the industry, and it would also help the operatives to become steadier. He did not hold the opinion that electric light working was better than daylight working. With a 12-hour day, consisting of 11 hours of actual work and two half-hour intervals, he could dispense with 10 *per cent.* of the hands, and there would be no excuse for idling. He gave the females three recesses, one for half an hour, another for three-quarters of an hour, and the third for a quarter of an hour and allowed them 2 *per cent.* of passes during working time. The women did not want to go out much, and this privilege was not taken advantage of. He did not reduce the number of hands in the short days, as the length of the day made no difference. He employed so many men to each machine, and there was always the same number, irrespective of the length of the day. To cover absentees he engaged 10 *per cent.* extra hands. The personnel changed every year, but the same men came back again. In addition to the half-hour midday interval, the men on an average also took half an hour off in the morning and afternoon. He could not afford to close the mills for half an hour in the fore and afternoons, because although the men might individually go out, yet the machinery did not stop. He had never tried an 11-hour day, because they had to compete with other mills; and they suffered, as it was at present, in competition with those Bombay mills which worked long hours. From the working point of view the short day would be more expensive at first, but in time the disadvantages would be counterbalanced, and then the shorter day would be more profitable than the long day. If all the mills adopted an 11-hour day, then they could reduce the number of their hands. Witness ascribed the fact that the women did not idle to the law giving them recesses. He would not say that the loss was great when working with electric light. They tried the night and day working for two years. About three-fourths of the machines went at night, and the production was much shorter. They had also to duplicate the supervising staff. He approved of all that the mill had done in regard to encouraging the operatives, and but for these encouragements the hands would have changed still more. Witness saw a gain to the mill by reason of these benevolences, and even if their hands had changed a great deal, yet the Empress Mill was better off than other mills. He would approve of two half-hour stoppages, in lieu of the one midday interval between the hours of 8-30 and 10-30 A.M. and 1-30 and 3-30 P.M. If a fixed 12-hour day was decided upon, then the half-timers' hours should be reduced to six, but without the half hour's rest interval. Mills would be inconvenienced if the half-timers had to be away for half an hour in the course of their 6-hour day. The proposed "young persons" class, with hours limited to 12, would not affect the working hours of their mill. Such a class would not control the hours of the spinning department. He would have to employ more adults, and do without the "young persons." It might be hard, but he could do it. If all the half-timers and "young persons" were dismissed at a particular hour, he could not continue to run the mill economically. If the "young persons" only were dismissed, he could work the mill. They had a separate spinning mill and a separate weaving mill, and the weaving could go on independently of the other. They sometimes worked on Sundays to make up for a holiday, but they never called the hands on a holiday for cleaning purposes. They worked the dyeing and bleaching by night during busy times, and there were always two intervals by day and two by night. There might be a few "young persons" in the dyeing department at nights, but women were only employed in the daytime. It was his opinion that if they sought to restrict the working day by the creation of the "young persons" class with hours limited to 12, the Bombay mills and all other mills would do without these "young persons" altogether. He believed that the creation of a "young persons" class would not be enough to stop the long hours in the Bombay mills. There was, of course, the labour difficulty to be considered. Mills would be worse off if they dismissed all their "young persons," but if one mill did so, others would have to follow suit The "young persons" worked full time, and received the same wages as adults; so it would not cost the mill anything to engage full adults in their place. The smell in the mill noticed by the Commission was not due to the water from the tanks being used for humidifying. The tank water was not good for drinking; he had no objection to the water being filtered before being used for humidifying. The present water had been used for many years, and lately they had arranged with Government to have the water in the tank changed once a year. He had no objection to a standard of purity of air, provided that it could be arrived at by a simple test. The question of the physical fitness of a child should be left to the mill-owner and parents; if the child were rejected from mill work, he would have to do harder work outside. He had no objection to children suffering from consumption or other contagious diseases being prevented from working in a mill. When there were plenty of weavers, one man used to have the care of one loom, but now some men had to take charge of two looms. Many of them were inefficient; the work was not so good; and the production was not so high as when they had a man to each loom. The figures representing waste in statement D signified waste in the process of manufacture, which could be worked up again. He was satisfied that in the longer day more waste was made.

Witness No. 257.

The Agent, the Currimbhoy Ginning and Pressing Company, Limited, Kotal.

The Agent, the Currimbhoy Ginning and Pressing Co. *Written evidence.*

The name of our ginning mill and cotton press is the Currimbhoy Ginning and Pressing Company, Limited. There are one hundred gins in our ginning factory. We employ 92 men, and 137 women; no children are employed. There are 75 men in the press and 7 women. No children are employed there. Our ginning mill and press usually work from November to the end of May, the working hours being from sunrise to sunset. The average number of hours worked in the ginning mill and press is 12, and during this time each person gets intervals of rest for 1½ hours.

I do not agree with the proposal to make the Factory Act applicable to ginning mills, because the dealers in cotton will have to suffer losses if their cotton cannot be ginned in time, owing to the fluctuating rates of the market. Every person dealing in cotton wants to get his cotton ginned at the moment he wants it. Under the Factory Act permission will always be required from the local inspector, and if it is not obtained in time all the cotton dealers will meet with great difficulties and losses, and in that case the ginning mill would suffer. I have no objection to bring the press under the Factory Act, because it works in the day time only. The suggestion not to permit the employment of women at night is not approved, because we find great difficulty in getting men for night work, and if a few of them be available they will demand wages 50 % higher than those of the women. If the Factory Act be made applicable to all the ginning mills, I think some special provisions modifying the general law would be necessary. In my opinion the permission of the local inspector to work in shifts or sets should not be required for the reasons already explained. I agree that the line shaft should be fenced, and I see no objection to casing in the shafting between the drums. I think women should be prohibited from working in front of the opener, because women are not so careful as the men are. I cannot make any suggestion to prevent accidents from stones hurled out from the opener, or from fires there, but I think water must be kept always ready. No accident has occurred in our ginning mill or press for the last five years.

Note.—The witness did not attend for oral examination.

Witness No. 258.

Mr. Dhoondi Raj Thengadi.

Mr. D. R. Thengadi. *Written evidence.*

The working hours of adult males should be limited, as the physique of the worker is affected by working long hours in tropical climates and by attending to machinery that is constantly working and thus not allowing any time for rest or respite from monotony. The number of working hours should be limited to 12 a day, including the hours of rest, and the restriction should be enforced by law. The legal working hours should be from 6 A.M. to 6 P.M. The engine should be stopped for one hour from 11-30 A.M., to 12-30 P.M. As the result of illegal employment as "adults" of persons between the age of 12 and 14, there has been physical deterioration. But no law need be passed. For the present the age of half-timers should be defined from 10 to 16 instead of from 9 to 14. No register of "young persons" need be kept; but increase in the age of "children" or half-timers to 16 years will secure all that is desirable for the present. The employment of women at night should be prohibited. The minimum age for children should be raised to 10. It is better to get the children certified as regards their age and physical fitness before being allowed to work in factories. But practically the requirements of this law have not been carried out properly up to this time. Children, who have hitherto worked half-time, should be required to produce certificates as regards their ages and physical fitness, before being allowed to work as "adults." It should be prescribed by law that six hours of child's labour be divided into 3 hours' labour in the forenoon and 3 hours in the afternoon. The remaining three hours in each shift should be employed in giving education to half-timers, to prevent them from being employed elsewhere. For the present, when the factory owners have not seen the advantages of educating their labourers, they should be obliged to provide elementary education at their expense, supplemented by Government aid and supervision, where necessary. Non working young children should be prohibited from accompanying workers to dangerous parts of factories. This prohibition can be enforced by supposing or taking for granted non-working young children, when found within the factory premises, as working children in the factory. An attempt should not be made, by testing samples of air taken from factories in India, to prescribe an analytical standard of purity for air, in factories, with a view to secure proper ventilation. The present restrictions on the basis of cubic measurement are quite sufficient. No similar attempt should be made to prescribe a standard of moisture in factories. No standard of purity should be fixed for water used for humidifying purposes. The standard of latrine accommodation should be raised to one seat for every 25 workers, and the provision of separate urinal accommodation insisted on.

The provision of doors to open outside in the working rooms will be better than the present arrangement, for cases of fire. No further precautions for fencing machinery are necessary. Arrangements should be made to secure uniformity in the administration of the Factory Act throughout India. Full-time medical inspectors of factories should be appointed to inspect the factories, and the present factory inspectors should assist the full-time inspectors I am the managing proprietor of the Gajanan Ginning Factory, Nagpur. About 20 women and 12 men are employed to work the machinery of this factory. The factory commenced working from 15th November 1907, and will probably be closed by the end of March 1908. The factory is worked from 6 A.M. to 6 P.M. during the day. A person employed in a ginning mill or press usually works from sunrise tosunset or sometimes more, if there is pressure of work. They are usually given some time to take their food, without stopping the entire factory, by turns. I approve of the proposal to bring under the Factory Act ginning mills and presses, irrespective of the number of months they work in a year and irrespective of the number of men working in them. The Factory Act

is enacted to protect the workers against their employers, who would, in order to make more profit out of their concerns by keeping down the labour charges as low as possible, work their hands for as long a time as the workers can allow for the money they received, without minding the suffering and the consequent deterioration the workers must undergo by such long hours of labour in tropical climates. I approve of the suggestion to prohibit the employment of women on night work for the following reasons :— Mr. D. R. Thengadi.

(*a*) If women are allowed on night work, I have found that they work in day time in one factory and in night time in another without taking rest.

(*b*) They are also found to go wrong more often under the cover of night.

(*c*) By night work they often neglect their family duties and duties to their offspring.

So far as my knowlege of the Factory Act goes at present, I do not think that any special provisions modifying the general law would be necessary in the case of ginning factories or presses, except those alterations suggested above. I do not agree with the view that in a large number of ginning mills the line shaft is inadequately fenced. If the line shaft is kept perfectly bright and clean and shrouded couplings be enforced, the line shaft when working is as harmless as any other machinery, when fenced. If the shafting is encased between drums the casing comes in the way of the working of the belt, and the shaft is thereby kept unclean, which has greater chances of catching persons' clothing than clean ones. I do not see any reason why women should be prohibited specially from working in front of the opener : the dangers of the working of the opener being applicable equally to men and women. To prevent stones from being hurled from the opener, I suggest that a platform with grid or square openings be prescribed by law for stacking cotton before it is delivered to the opener. Secondly, that the first lattice of every opener be made slanting after the fashion of hopper feeders and be, like the latter, provided with spikes to take up cotton. This will reduce the outturn of the machine, but will effectually prevent many fires and breaking of the blades or spikes of the machine, not to speak of the injury to the attendants. There are two subjects which I wish to bring to the notice of the Commission :—

First.—The object of the Factory Act is not always fully gained, owing to the fact that the officers in charge of the administration of the Act do not fully realize the spirit of the Act. It is sometimes very much under-administered owing to the officers understanding the requirements of the law very indifferently. It is sometimes over-administered owing to the officers not being practical men. I have found sometimes the fencing of the machinery, which is primarily intended to guard the labourer from injury from the moving machinery, comes in the way of his working the machine, or puts awkward impediments in his attending the same.

Second.—It is generally understood by the factory owners that any restriction imposed on the free employment of labour, through the Factory Act, will bring their concern into a loss. I believe this is not always true. The restrictions are made applicable to all factory owners equally and one is not made to suffer more than the other. Increase in the cost of production, if any, due to restriction on labour is common to all, and the price of the manufacture soon rises so as to make the trade pay generally. Inventions, in order to be profitable, must be monopolized. When universally employed, competition soon reduces the margin of profit. The same holds good with restriction. They decrease the margin of profit, when made applicable to individuals only. But when in general application, their evil of reducing the margin of profit remains no longer. It is, however, necessary to see that restrictions are put equally on all concerned, without giving any undue advantage to the few favoured, to protect the workers against injury of any kind.

Oral evidence.

Witness stated that there were twelve gins in his factory, which was not under the Act. He had no objection to the Act being applied. There was no real necessity for the employment of women at night in gins. Men could be obtained for this work, but the cost of production would increase. He approved of a prohibition against women working at nights in gins. Witness was formerly chief engineer of the Swadeshi Mill, and also worked as an erector of mill machinery for one year. The scarcity of labour on mills was to be attributed largely to the nature of the work. The hands objected to receiving their pay so late, and if they absented themselves for one day, they were fined two days' pay. Labourers preferred ginning work, were paid weekly and the work was freer. The hours in the cotton mills on the hot days were also too long and he knew that the hands would like a 12-hour day. He had worked in the mill, and knew these things from experience. The people worked better in the short cold weather days, and they found the long, hot weather days very exhausting, In all factories where motive power was used the working day should be restricted to twelve hours. He disapproved of the simultaneous shift system, whereby the object of the Act was defeated, and women did not receive their legal intervals of rest. The extra hands were mostly on paper, and not at the gins. Where women were employed the engine should stop for one and a half hours. If factory labour generally had not asked for a shorter day, it was because the hands had not the intelligence to do so They had sufficient intelligence, however, to leave mill-work for other employments, such as house building and agriculture, which gave them more time to themselves. The mill operatives would like a 12-hour day in the hot weather, but they would not like to make up the day to 12 hours in the cold season. They would prefer daylight hours to a fixed 12-hour day during the cold season, which entailed working by electric light in the short days. Labour in the manganese mines was lighter than mill work, and the day was one of eight hours. The mills paid higher wages, but labour was going to the mines.

Witness No. 259.

Mr. M. Ranganatham Moodaliar, Agent, Harvey and Sabapathy Company, Limited.

Mr. M. Ranganatham Moodaliar. *Written evidence.*

I represent the Harvey and Sabapathy Company, Limited (Ginning and Pressing).

We employ 45 men and 98 women in the ginning factory, and 55 men and 20 women in the press. No children are employed. The ginning factory commences work generally from 1st

M. Ranganatham ›daliar.

November and stops at the end of April. The press factory commences work generally from 15th November and stops at the end of May. The gins work from 6 30 A.M. to 6 P M., and the press from 7 A M. to 6 P.M. The average hours are 11 to 11½ hours a day. During this time they are given full 1½ hours' rest by entire stoppage, and by shifts engaged to relieve them at intervals. I approve of the proposal to bring under the Factory Act all presses and ginning factories, as thereby the owners will be obliged —

(*a*) to engage competent hands and keep the machinery in good working order, and thus avert accidents as far as possible;

(*b*) to see that the hands are not overworked;

(*c*) to keep the factory and compound in clean and sanitary condition.

I do not approve of the suggestion to prohibit women from night work, as the ginning factories are worked only for a month or two, at most, in full crop season. Of course, care must be taken to engage such of them as have not worked during the day. To employ men in place of women is not advisable as—

(*a*) it would be difficult in the first place to procure so many men in a busy season;

(*b*) it would be more expensive in these days of keen competition when the owners are not making ends meet properly;

(*c*) it is a mere waste of men's labour as the work will be too light for them.

Besides, the women are themselves anxious to give their helping hands to their husbands and children in these hard days by working at nights, when they have such an opportunity. The present rules are enough, but it would be better if they were more elastic in actual operation. The line shafts must be sufficiently covered between the drums, and some provision should be made for the workmen to hold a grip while putting the belt on the drums, as almost all the accidents, according to my experience, are due to men being overbalanced, there being no support. They get caught between the drum arms or between the drum face and the belt. By keeping any support such as railings on each side of the drums, the workmen can save their body, having a grip of the rails with the other hand, and even if caught, will try to drag out their hand and escape accidents. The women should not be allowed to work in front of the openers as they get confused when a fire occurs and cannot escape easily like men, the place being rather risky. The outlet of the opener should be so constructed as to throw the cotton high in a slanting position and not horizontally so that the cotton and any stone hurled will not hit the men. In fact, men should not stand in front of and close to the opener as they, by standing on the sides, can draw the cotton by wooden rakes. Further, the fittings of the opener inside should be lined with copper or brass to prevent sparks due to the stones dashing against them.

There was an accident in our factory on the 23rd December 1905, when an oiler was caught in the second motion line shaft pulley arm, while putting the belt on, and had his right hand and left leg bones fractured. The oiler is all right now and able to work. We had no other accidents during the last 5 years. I may mention that the factory inspectors, at times, insist on the owners carrying out certain repairs costing pretty large sums and within a short time, and if this happens when the season is in full swing, the owners are put so some trouble and expense. I am not, of course, mentioning this as a complaint against any of them as they seem to be helpless owing to some pressure over them. If so, I humbly submit that they be allowed some discretion to minimise the expenses, troubles, etc., which the owners are put to in such cases. The word *factory* in one or two sections of the Act is not clear, and it would be better if the factory compound is distinguished separately from the place worked by steam power.

al evidence.

Witness stated that they employed 25 *per cent.* extra women for working on the gins, and these extra females enabled all to have intervals of rest. All labour was supplied by contract, but the firm kept an attendance-roll which was under the manager's supervision. There was a pool in Nagpur, but the profits were not large, as there were too many gins. All were under the Act. They had not had a fire in the press house for the last three or four years. Had there been a fire he must have been told about it. They had a press opener, and sometimes they put steam into it while using it. There was a great deal of cotton fluff in the air, and he should be glad if this could be remedied by means of fans. He had now no complaints to make of over-inspection, but once at Akola the Civil Surgeon ordered him to introduce ridge ventilation in the press house within a given period. Witness himself wanted to postpone the alterations until the end of the season, but was not permitted to do so. Occasionally they had to pay high wages for ginning labour, as people would not leave permanent mill work for a season's ginning.

Witness No. 260.

Rao Sahib Dajee Ramchandra, Senior Hospital Assistant, Nagpur.

Sahib D. chandra. *ten evidence.*

I am acquainted with all classes of mills, but not of factories. I cannot supply statistics as to the health of the factory population. The non-factory population is superior to the factory population. In my opinion the factory population is below the general average of the same class as regards physique. They suffer more than the general population from lung disease, dyspepsia, &c. No statistics can be supplied. No particular method can be laid down for determining the age, except the general development of the body, bones and teeth. These are the means for giving approximate age. The following is the average age at which the permanent teeth appear in Indian children:—

	Years.		Years.
(*a*) Central incisors	7	(*e*) Posterior bicuspids	10—12
(*b*) Lateral „	8— 9	(*f*) Anterior molars	6— 7
(*c*) Canines	10—12	(*g*) Second „	11—12
(*d*) Anterior bicuspids	9—10	(*h*) Posterior „	18—25

Some factory owners do evade the existing law regarding the employment of children. I am not in favour of the appointment of whole-time medical inspectors. I propose a standard of latrine accommodation of one seat for 15 to 20 persons. Working hours of adult males should be limited: the physique of workers is certainly affected by long hours. The number of hours should be fixed at 10. The legal working hours should be from 7 to 11 and from 12 to 6. The engine should be stopped for half an hour each day, no adult male should work for more than 10 in 24 hours. One hour's rest from 11 to 12 would be suitable. There is no necessity of creating a special class of workers if the half-timer and full-timer classes are brought into force. Employment of women at night should be prohibited. Minimum age for children should be 10 years. Certificates of age and physical fitness should be produced before admission. Similar certificates are necessary to work for full time. It should be prescribed by law that the children should be employed in regular sets. Elementary education should be given to the children working in the factory at the expense of the factory owners. Non-working young children should not go to dangerous or unhealthy parts of factories unless they obtain a pass from the manager. An attempt may be made by testing samples of air to fix a standard of purity. A standard of moisture may also be prescribed, and a standard of purity for humidifying water. One seat for 15 to 20 persons should be prescribed for latrines, and separate urinal accommodation should be insisted on. All doors should open outwards. No arrangements are necessary to secure uniformity in the administration of the Factory Act throughout India. Full-time medical inspectors are not necessary. Rao Sahib D. Ramchandra.

Witness stated that he had been in charge of the Nagpur hospital for some years, and was also medical officer to the Swadeshi Mill. Both in the mill and hospital he had had opportunities of studying mill operatives, and in his opinion their general physique was lower than that of persons of the same class in outside employments. Mill operatives suffered from lung disease, dyspepsia, sores on the legs and hands, rheumatism and general weakness. The lung disease was usually bronchitis, and not generally of a tubercular character. He had also seen a few cases of asthma. He believed that mill operatives were more prone to lung disease than persons in outside employments, owing to the bad ventilation of the mills; but, with this exception, people who worked in the open air were just as prone to the other diseases as those who worked in mills. The bronchitis cases were chronic, but he could not say how many cases there were. The Civil Surgeon was his immediate superior in the hospital. He had not drawn the Civil Surgeon's attention to these cases, and did not know whether the Civil Surgeon agreed with his opinion or not. So far as these cases were concerned, it was a fact that the subordinates saw more of them than the Civil Surgeon. In his dispensary witness treated 50,000 new patients every year; and if they included both old and new patients, then the number rose to one lakh. Witness put the limit of actual working hours at ten a day. He regarded the question from the medical point of view, and not from its economic aspect. While there was no great abuse of child labour in Nagpur, yet mill work deteriorated their health, and stunted their growth. The half-timers were weaker than children in outside employments. Witness visited the Swadeshi Mill every day, but was never asked to express an opinion as to the physical fitness or age of the half timers. He considered that the minimum age for children should be raised to 10 years, as considerable development took place at about the ninth year, which was too early for a child to start on mill work. He had seen children who had suffered through being employed too young, but not many. No boy should be allowed to work unless certified as medically fit. If mill operatives only worked 10 hours a day at present there was no hardship so far as actual work was concerned, but the confinement for a longer number of hours was a hardship. He had no knowledge of the interior working of the mill, or of how the hands worked. He objected to the long hours, both on account of the confinement and the badness of the ventilation. Out of 1,000 hands in the mill about 30 attended the mill dispensary every day, and he had about 200 patients at his outside dispensary daily. Both the mill patients and outside patients suffered from the same complaints. The Nagpur people were not a big built lot; they were of slight build, and the children also were small. Small children were not solely found in the mills. Witness had no statistics on the subject, and kept no books at his dispensaries. He understood that the water in the tanks between the Swadeshi and Empress Mills was used for humidifying purposes. It was foul water and, in his opinion, should not be so used. There were some big wells in the compound of the Swadeshi Mill, and he did not know why water from these was not used. He agreed that it was desirable to suggest to the manager of the Swadeshi Mills that pure water should be used for humidifying purposes. Witness could not trace any illness as attributable to the tank water having been used in the humidifiers. *Oral evidence.*

Witness No. 261.

Mr. Rustomji Faridoonji, Deputy Commissioner, Bhandara.

I do not think the working hours of adult males should be limited. I have seen no deterioration in the physique of workers My experience is limited to the Province of Berar since 1889, but I have visited factories in other parts of India, and my general impression is that the condition of the adult male workers is really better than that of many men following other occupations. This is evidently due to the fairly liberal wages paid to adults in factories, and the consequent higher standard of comfort which now obtains among this class of labourers. The Indian labourer is well able to look after himself, and for years to come there is absolutely no risk of his overworking himself and endangering his health. The fact is that even with the higher standard of comfort that has been reached his wants are few and they are easily satisfied, leaving him a margin for a holiday which he takes pretty often. While I would not advocate any restriction as to the number of hours for which males should work, I would insist on the engine being stopped for half an hour. This would ensure men like the engineer in charge, fitters, &c., having a proper rest, and would allow them no excuse for absenting themselves for meals, &c., and leaving the machinery to look after itself, as is so often done at present. For the safety of the employés, it is also very necessary to fix the number of hours for which engineers, &c., should work. When the factories work night and day by sets and shifts, two engineers are Mr. Rustomji Faridoonji. *Written evidence.*

Rustomjee Faridoonjee.

expected to be employed, but this is often evaded, and it would be as well to legislate specifically for the superior employés. The struggle for existence amongst the labouring classes in India is not as hard as it is in the West. Here the social laws and the special tenderness of parents or other guardians towards children sufficiently protect the persons in question. I have not noticed any physical deterioration among persons of this class, and I think there is no necessity for any legislation on the subject. I see no advantage in the maintenance of a register of all workers under 16. It may lead to unnecessary refinements, and there is a risk of wrong conclusions being drawn after hasty or superficial enquiries. I am very strongly of opinion that the employment of women at night should be absolutely prohibited. This may cause hardship to some so-called *purdah* women who work in factories at night. But it is notorious that women working by night at factories are liable to great temptations. Further, night work must and does entail the unintentional neglect of infants. Women who work in factories at night are often made by their men to toil by day as well. Altogether, the employment of women at night at a place like a factory is opposed to the custom of the country, tends to immorality and physical deterioration, and to the neglect of children, particularly infants. I would raise the minimum age at which children are allowed to work in factories to ten. I do not of course advocate this raising of age on any physiological grounds, but in the absence of birth certificates, it is much easier for employers to distinguish this limit than the limit of nine. I think the manager may be allowed to admit children at his own risk, their age being certified by the medical officer at his inspections, children who are unfit being rejected by that officer. It would be invidious to make any distinction as regards admission of children between places where there is a resident medical officer and those where there is none. Besides, there is no reason why the owner of a factory should suffer for any delay in medical inspection of children before they are admitted The responsibility of admitting under age children, if thrown on the employers, would in itself act as a sufficient check against abuses. I would not require any certificates for half-timers before working as full-timers. Such certificates would hamper industries unnecessarily, and the law provides sufficient penalties for any infringement in this respect.

It does not appear to be necessary to prescribe that children must only be employed in regular sets. The provision of education for children is scarcely feasible in the smaller factories, and I don't see how this can justly be insisted on unless education is made compulsory for children outside factories. A prohibition against non-working children entering factories is very desirable. The factories should have separate accommodation for non-working children to be left in charge of a nurse. Judging from the conditions in factories generally, I do not think that there is any necessity for fixing a standard of purity of air. The factory owners in India are generally very amenable to orders or advice given by medical inspectors. The conditions in India favour the provision of plenty of ventilation, and this is generally provided. With the climatic variations and varieties in India, a standard for moisture in the air for the whole of India or for different parts thereof would be a most difficult matter, and would burden local industries with a lot of needless expense, for the standard of moisture kept up in factories cannot be attained outside them. A standard for humidifying water does not appear to be necessary in India. The habits of the people in India are remarkably regular, and in many cases the present scale of latrine accommodation is found more than ample. Besides a distinction will have to be made between large towns and rural tracts where people resort to fields. As regards the provision of separate urinal accommodation, it is necessary in some cases and not so in others. This question may well be left to local rules to decide. All doors should open outwards. The present rules for fencing machinery are sufficient. Each province has its own special industries, and there is scarcely any necessity for making the administration of the Factory Act more uniform than it is at present. The Government of India control the administration generally and the desirable amount of uniformity is attained, leaving to Local Governments sufficient scope for dealing with details peculiar to their charges. There would be no justification for the appointment of full-time medical inspectors generally. As it is, inspections by medical officers are overdone in some places. In no district in the Central Provinces and Berar, I think, can a whole-time medical officer be fully employed. If a special medical officer were appointed for more than one district, he would not be in touch with the district officers. I think that on the whole the Civil Surgeon and the Assistant Surgeon in the district are the proper officers for inspecting factories I think that there should be a general penal clause in the Factories Act providing for breach of any rule or disobedience of any legal order issued by proper authority. Such an omnibus clause is very necessary to enforce all legal and proper orders.

NOTE.—The witness could not attend for oral examination.

WITNESS No. 262.

Rao Bahadur Ganpat Rao Gopal Ghatate, Nagpur.

Rao Bahadur G.R.G. Ghatate. *Written evidence.*

I don't think it necessary to limit the working hours of adult males. Their physique is never affected by working long hours. The system of limiting working hours of adult males is prevalent nowhere, and I don't know why they should be limited in this country. If the working hours are to be limited at all, they should not be more than 12½ hours, except when working by shifts, the working hours should be from 5-30 A.M. to 6 P.M. in April, May and June, and from 6 A.M to 6-30 P.M. in other months. The engine should be stopped from 12 to 12-30 P.M. for half an hour. In factories working on the day-shift system the legal working hours should not be more than 12 hours for adult males, the other factories should be allowed to work any number of hours. The employment as adults of persons between the ages of 9 and 14 has resulted in their physical deterioration, and it is necessary to consider them as half-day workers. Even now, too, such persons do not work for more than 7 hours (including ½ hour's rest). I do not think it necessary to maintain a separate register for all workers under the age of 16. Such a register is generally maintained in factories for half-day workers. Women may not be allowed

to work at night in mills, etc., which work for the whole of the year, but in factories which work only for a few months during a year they should be allowed to work at night-time. The minimum age at which children are allowed to work in factories should not be below nine. It is not necessary to raise it beyond nine. A certificate of age and physical fitness is not, I think, necessary before the employment of children in factories, nor is it necessary for those who are allowed to work as adults, but who hitherto worked half time. It should be prescribed by law that children should not be employed to work except by sets or double sets. In my opinion factory owners should not be obliged to provide elementary education for children working in their factories. A rule should be made not to allow labourers to take non-working young children to unhealthy or dangerous parts of factories. This rule can, I think, be easily brought into force by the managers or proprietors of factories. I represent the Rao Bahadur Ganpat Rao Ghatate and Hon'ble G. M. Chitnavis Ginning Factory, Dhantoli. Twenty men and 36 women, besides one engineer, a manager and a clerk, are employed. No children are employed. The gin usually works from the 15th November to the end of April. Usual hours of working are from 6 A.M. to 6-30 P.M. The average number of hours for which a person works is only 12½ hours during 24 hours (including half an hour's rest). It is not desirable to bring ginning mills and presses, which work only for a short period during a year, under the Factory Act, because it would hinder their working for trifling reasons. It is sufficient if an adequate water-supply in case of fire, cleanliness, conservancy and such other things are not neglected. Women should not be prohibited to work in gins and presses during night, firstly, because they work only for a short period; secondly, because women are specially fitted to serve as cotton feeders on gins; and thirdly, because night-working women are not the same as those who work by day. Of course, any immoral acts, whether at day or at night, should be severely dealt with. If it is decided to make the Factory Act applicable to all ginning mills and presses, almost all the rules, except fire-precautions, should be rather lenient. If the rules be made applicable in the same rigour, the result will be that the gins, etc., will have to be closed every now and then, putting the owner to a heavy loss. I do not see any objection to prescribing that the line shaft should be cased in between drums. Women should not be prohibited from working in front of the openers. Women as well as men are liable to be hurt by accidents, if any. Precautions are even now taken so that stones may not be hurled out or fire occur. There has been no accident in my gin during the last five years. Rao Bahadur G. R. G. Ghatate.

NOTE.—The witness could not attend for oral examination.

G. C. B. P., Simla.—No. 1 F. L. C.—13-5-08.—1,710.—R.G.G.

DELHI.

WITNESS No. 203.

Mr. R. Humphreys, I. C. S., Deputy Commissioner, Delhi.

Mr. R. Humphreys. *Written evidence.*

So far as my experience of mills in the Punjab goes, there appears up to the present to be no necessity for limiting the working hours of adult males, and I am not aware that the physique of the workers has been affected by long hours. Usually the working hours do not exceed 12, or in cases 13 hours a day, including the midday recess. Usually some system of piece work exists, and in many mills there is a shed outside in the compound where the men can go for a smoke for a few minutes now and then. However, with the multiplication of factories and the extended use of electric light, it seems probable that in time it will become advisable to limit the hours of work, and power should be taken to impose such limits generally in a province, or in any local area, where the necessity for doing so might arise. If hours are limited, the limitation should I think take the form of prescribing the maximum number of working hours *per* day, not the time of commencing or stopping work. A time table that would be suitable for a Punjab winter would be unsuitable for a Punjab summer. The limit might be 13 hours, with a full hour's midday interval. I think the interval should not be less than one hour. I hardly think that there is at present, or is likely to be, any necessity to create a class of "young persons." I certainly think that the employment of women at night should be prohibited. The practice does not, I think, prevail at any of the mills in Delhi. It seems to me that ordinarily the minimum age for children might be allowed to remain at nine, but that more importance should be attached to physical fitness than to actual age. No one under nine years of age should be allowed to work, but a child of nine years or more who was puny, stunted, or weak, should not be permitted to work merely because he was above the minimum age. The standard minimum should be a normal healthy well developed child of nine years. It follows from what I have said above that I am of opinion that in every case certificates of age and physical fitness should be required before children are allowed to work in factories. Moreover, I think it is very important that each certificate should contain sufficient particulars for the identification of the child to whom it belongs, and should bear the finger impressions of the child. A duplicate of his certificate should be given to each child, and he should be required to have it always with him in a tin case for production when required. This would render identification easy, and prevent personation, or children working in different shifts in the same or in different factories under different names. I certainly think that children who have worked as half-timers should get another certificate as to age and physical fitness before being allowed to work as full-time adults. I do not think it is necessary to prescribe by law that children should work in regular sets. Section 7 of the Act, as amended by Act XI of 1891, seems for the most part sufficient. Of course the time table for each factory should show the hours of work for children, which should be adhered to. As far as the Punjab is concerned, I think a provision that factory owners should provide elementary education for their children is not required. If such a provision is adopted it should be subject to limitation, *i. e.*, I would only apply it to factories working all the year round, and regularly employing, say, sixty children or over. I consider it impracticable to make a rule prohibiting non-working young children from accompanying workers to dangerous or unhealthy parts of factories. I think it is impracticable on the whole to attempt to fix standards for purity of air, moisture, or water for humidifying purposes. Efficient inspection ought to be a sufficient safeguard. I think latrine accommodation should be at least one seat for every 25 workers. Separate urinal accommodation, while advisable, should perhaps not be universally insisted on, except in large factories employing, say, 300 hands and upwards. All doors of working rooms should certainly be hung so as to open outwards. I think the precautions for fencing if supplemented as proposed in the Government of India draft bill of 27th September 1905, clause 10 (1), are on the whole adequate. I am certainly opposed to endeavours being made to secure uniformity in the administration of the Factory Act throughout India. We must remember that we are dealing with a continent as big as Europe, where conditions vary from part to part as they do from country to country in Europe. I think it is a great mistake to be led away too much by a desire for uniformity. As I have stated above, I think the Act should give powers, in cases where uniformity is not desirable, to Local Governments to prescribe rules having the force of law, or to extend or limit the application of certain sections in the province, or even in a smaller local area. One of the greatest wants of our factory administration seems to me to be proper provision for inspection of factories by expert medical men. The existing arrangements appear to me to be quite inadequate. The Civil Surgeon inspects each factory twice a year, but, as with the district officials, it is an extra on one's regular work, and it is difficult to give it the time its importance demands. I am strongly in favour of the appointment of full-time medical inspectors of factories, in addition to the present inspectors. They will be all the more necessary if anything is done in the way of making the Factory Act more detailed in its provisions, as I hope will be the result of the labours of the Commission.

Oral evidence.

Witness stated that he had had 2½ years' experience as *ex-officio* inspector in Delhi; his previous experience was of ginning factories. He had an enquiry made, about eighteen months ago, as to the length of the working day in Delhi. The Assistant Commissioner reported that the mills worked up to 14 and 15 hours. The time given in his written evidence was meant to be an average, not a maximum. Personally he favoured a working day of thirteen hours, including one hour's interval. He had heard no complaints about the length of the working day in Delhi, and there were no signs of deterioration in health. This might be because the operatives adapted themselves to the long hours. Mill labour was recruited from the district, and the labourers were chiefly cultivators and low caste people. A large number are Poorbiahs from the Cawnpore

side. Even if the operatives worked in a slack and casual way he did not approve of a day of more than twelve hours' actual work. With shorter hours the operatives might gradually improve in their application to their work. There was no special inspector in the Punjab. The Civil Surgeon inspected all factories in Delhi twice a year and witness did so once a year. He was also assisted in the inspection work, when necessary, by an Assistant Commissioner. He was not aware that half-timers worked the whole day in the Delhi mills. He thought that most of the children were certified. The present system of inspection in Delhi was not effective, and he approved of the appointment of a special inspector who would relieve the *ex-officio* inspectors of their work and responsibilities. There were very few factories outside Delhi. Two iron works in Delhi were allowed to work on Sundays, under a special exemption, but witness did not know why this had been permitted. He did not approve of single factories being exempted in that manner. He had not noticed that the children in the mills were stunted, but he agreed with the proposal to have certificates of physical fitness. In his opinion it would entail hardship if non-working children were prohibited from entering factories. He had no objection to the fixing of a standard of purity of air, provided expert inspectors were appointed and they had appliances for making the tests. He did not favour fixed starting and stopping times for work in large areas, but would rather aim at limiting the total number of hours to be worked, leaving the arrangement of the actual working hours to be settled in accordance with local conditions. He would allow each mill to arrange its own hours between certain limits. If there were uniformity in starting and stopping times it would, of course, make inspection easier. He approved of a 12-hour day for Delhi, between the hours of 6 A.M. and 7 P.M. in the cold weather and 5 A.M. and 6 P.M. in the hot weather. It was possible that the Indian workman appreciated more highly a later start than an earlier stoppage. In that district a midday stoppage was convenient, because it was customary for the operatives to take their big meal between 12 and 1 P.M. He did not think that two half-hour stoppages would be suitable for Delhi. Mr. R. Humphreys.

WITNESS No. 264.

Lieutenant-Colonel D. M. Davidson, I.M.S., Civil Surgeon, Delhi.

I think that it is only reasonable that a man's hours of labour should be limited, as he is not a machine. Twelve hours a day appear to me sufficient for any man to work. I cannot say that the physique of the workers has been affected by long hours, and there are no means of ascertaining this in my experience. Twelve hours a day is sufficient when no shift is in force; the mill should be closed during the rest interval, and in cases where a shift is in force the names of the men in the different shifts should be shown in separate registers so that on an inspection it might be possible to check any particular man. I should recommend that when work is not by shifts in the hot weather, from March to August, the hours should be from 5-30 A.M. to 6 P.M. and for the rest of the year from 6 A.M. to 6-30 P.M. There should be one hour's rest between 12 noon and 2 P.M. Even in cases of shifts I think 5-50 A.M. in summer and 6 A.M. in winter is early enough for them to start work, as this means that in many cases, when the labourers come from a distance, they have to get up one hour earlier. The night shift should also get one hour's rest at midnight. I have not observed any deterioration in children between twelve and fourteen from overwork, but again it is impossible to get data from which to form an opinion. I would fix the age of children from ten to sixteen. A separate register for children up to sixteen should be kept, and this is now being done. I consider that women should not work at night. I think ten should be the minimum age for children. Certificates of age are essential, and it would be advisable also to have certificates of physical fitness. If the above certificates have been granted, and a copy given to the child, then it appears unnecessary to again procure a certificate of age before employment of a half-timer as a full-timer, as the age of the child can be ascertained at any time from the certificates. After sixteen the child might be considered as an adult, and unless certificates of fitness are compulsory for adults, it does not appear necessary to compel persons over sixteen to present similar certificates. It is essential that children should be compelled to work in shifts, otherwise there is a great temptation to make them work longer hours. Morning and afternoon shifts are advisable. Children should not work at night. I see no reason why factory owners should be compelled to educate the children employed by them. It is very difficult in India to prevent non-working children accompanying their parents to factories. It would entail hardship on many a family to prohibit this, and I have never seen an instance where the absence of such a rule led to any bad results. They should not, however, be permitted to go near dangerous machinery. This can easily be left to the management. I do not see any need to prescribe any standard of purity of the air. The question of moisture in the air is a technical one, and as far as health is concerned, it appears unnecessary, considering the different climatic conditions of India. If moisture is procured by steam the water should be sterilized, and there is no need to fix a standard of purity for the water employed for this purpose. The latrine accommodation should be 5 *per cent.* It would be advisable to have separate urinals. The doors of the factory should open outwards. The factories I have seen are all properly fenced, and existing powers are ample to meet all cases. The climatic conditions, and the habits of the people, vary so much in different parts of India that it would be difficult to secure uniformity in the administration of the Factory Act. I do not consider that any more Inspectors are required. The great tendency in India is to worry the people with too many inspections. I do not understand what is meant by "class of factory operatives" in the questions for medical witnesses. The class are ordinary labourers and vary with the part of India they come from. In the north they are sturdy and well built, and healthy. In Delhi they are more degenerate. I have not observed any marked difference between factory hands and the general body of labourers of the same class. There are no statistics that I am aware of regarding the morbidity of factory employees. I have made no special study of the eruption of the teeth in India. Statistics on the subject would be vitiated by the absence of proper certificates of birth. I have seen cases where children have been employed without certificates of age, Lieutenant-Colonel D. M. Davidson.

Lieut.-Colonel D. M. Davidson.

and where there was reason to suspect that they were working all day. Most of these have occurred in piece-work, such as hand reeling, where a family work together. Children under nine, if seen in a factory, are always said to be unemployed, and have only come with their parents I have seen no reason for the employment of further Medical Inspectors, but one Medical Inspector for each province might be appointed. If employed, they should not be allowed private practice. The pay will depend on the nature of the work and the class of medical man employed. One seat in twenty-five is insufficient latrine accommodation, one in twenty would be better.

Oral evidence.

Witness stated that he had been stationed in Delhi for five years. It was his opinion that the mill hands as a class were equal in constitution, health and physique to those in outside employments. He had seen no signs of ill-health attributable to mill employment. Neither had he seen any cases of phthisis which he could attribute to work in the mills. Phthisis was common in Delhi; both mill operatives and outside workers came to the dispensaries suffering from this disease. He kept the tabular statement prescribed by the Government which did not specify mill operatives as a particular class. Phthisis was not specially prevalent among mill hands; had it been so, he must have observed it. No opinion on the subject was of much value unless supported by statistics however, and these were not obtainable. He did not consider mill work specially unhealthy. If the occupation were unhealthy, he should have expected to find a few cases of phthisis in the mills, and he had not done so. He approved of a 12-hour day. He had tried to detect whether children were illegally employed, but considered it was impossible for any single inspector to discover evasions. At least half the children had always been certified, and the practice of obtaining certificates did not start only last February. In that month more children than usual were sent for examination, and his suspicions were aroused, but it was impossible to do anything. Without a good record of the marks of identification, and unless the certificate was retained by the boy, little or nothing could be done. He considered that the minimum age for children should be raised to 10 years, and that half-time work should continue up to 16 years. In jails a boy was considered as a juvenile until 15 years If his proposals would hamper the industry, he would not insist on them, however, especially in Delhi, where labour was so scarce. People in that district were very lazy. There could not be three classes in mill employment as a matter of practical possibility, and the boy of 14 to 16 years must be treated either as a half-timer or as an adult. Personally he thought that a youth between those ages should be classed as a half-timer, but if retained as an adult, then he must work adult hours There was a tendency to over-inspection, but he had no objection to the appointment of a full-time officer for the Punjab. Witness was limited by Government to visiting seasonal factories once a year, and other factories twice a year. So far as his knowledge went, there had never been a prosecution under the Factory Act. There had been some bad accidents, and one Deputy Commissioner had appointed a committee to inspect the factories in regard to fencing. That was now fairly good.

Witness No. 265

Mr. G. Robinson, manager of the Hanuman Mahadeo Mill, Delhi.

Mr. G. Robinson. *Oral evidence.*

Witness stated that he had been in Delhi for three months. His experience of cotton-spinning extended over 40 years, 19 of which had been spent in Bombay and Ahmedabad. In both of those towns his mill hours were from daylight to dark. He approved of a fixed 12-hour day all the year round with a compulsory Sunday holiday, and thought that if this were made law, they would get a larger annual production than under the present system in Delhi. His mill worked 14 hours in the cold weather and 13 hours in the hot weather; if they had a fixed 12-hour day, he thought they would get as much production as they did now. Under the present system the hands become tired towards evening, and production suffered. He had sometimes found men asleep in the mill. Witness had just started an experimental 12-hour day in the mill; it had been in force for one week Already the production was going up day by day, and in the course of a fortnight he hoped they would reach the old rate of production. The hands appreciated getting off two hours earlier at night, and the attendance was improving. He was also doing his best to stop loitering. Delhi labour was inferior to that in Bombay and Ahmedabad, but the long hours worked in Delhi had undoubtedly made the hands careless. Witness had arranged the half-timers in regular shifts, and about five of the boys had thereupon left in the hope of obtaining full-time employment elsewhere. He considered that the Ahmedabad hands were the best cotton spinners, as they were local men, whereas the *Mahrattas* in Bombay were continually taking long holidays. In Delhi they employed nine men on a pair of mules, as compared with seven in Bombay, and three in England. If he walked round his mill, he would only find five men on the mules at one time, however. They could not draw any useful comparisons from those figures owing to the vast difference in the cotton used. His mill spun from 6½'s to 20's. The hands came in on Sundays up to 10 A. M. to clean the machinery; this was included in the month's pay. The piece-workers were not paid extra for the Sunday work. The hands were given their native holidays in addition to the Sunday. If he could not have the machinery cleaned on Sundays, he should be compelled to work on that day when there had been a native holiday during the week.

Note.—The witness was not asked to submit written evidence.

Witness No. 266.

Rai Bahadur Lala Sri Krishn Das.

Rai Bahadur Sr Krishn Das. *Written evidence.*

I am the agent of the Krishn Mills Company, Limited, which employs 514 men, 46 women and 50 children. We have always worked for over 12½ hours a day. The longer the working hours, the greater would the production proportionately be *per* spindle. The waste would be greater only in

the same proportion as the production. The greater the production *per* day, the higher would the profit be, because of the initial expenses remaining the same. If a certificate of physicial fitness and age be required, it would be necessary to allow some time limit within which the employee should be allowed to work, pending examination. A period of 30 days should suffice. In my opinion the present arrangements are quite sufficient. A second certificate prior to the employment of a half-timer as a full-timer is unnecessary. It would be very impracticable, and could only be arranged with extreme difficulty. Children should be asked to produce the certificates of fitness, as half-timers or adults, that were granted to them at their first appointment, before they are given work. If they fail, they should be examined. No class of "young persons" should be created. Such a class —which means neither half-timers nor full timers—if created, would imply that their services would be utilized neither for half-time nor for full-time. The creation of the class would affect the factories very injuriously in two ways. In the first instance full sets of such workers will not be available, which would considerably shorten the number of hours during which factories are worked. Secondly, such workers, if paid as half-timers, would be dissatisfied and eventually leave the factories in disgust; but if paid as full-timers, this would not only cause a loss to factories, but would at the same time be a cause of discouragement to the adults, who would grumble. All these circumstances would combine to make labour more scarce. The proportion of women, half-timers and young persons would certainly be so very large that the hours fixed for these classes of workers would in fact determine the hours during which the machinery would run. The probable percentage of "young persons" would be more than 35 per cent. of the entire staff. I do not approve of any time limits for adults being prescribed at all; but, if the hours of adult-labour are restricted, I would prefer that employees should be left to fix the actual hours of work for themselves. Exceptional treatment is necessary in the case of ginning factories and presses, ice factories and flour mills, which are not worked all the year round, and have to be worked at night. It is not at all necessary, but is rather objectionable to have inspectors recruited in the United Kingdom. In fact, such inspectors would have to undergo fresh training here, being ignorant of the climatic conditions, the language of the country, the class of workmen available here, and other circumstances. There is field enough in India for the training of good inspectors. The present law is stringent enough, and should not be made more so. But elasticity in operation of all law is necessary. How this may be allowed would best be illustrated by an example. For instance, if a factory remains closed for some days during a week, through some accident or unavoidable circumstances it should have the option of working overtime to make up the deficiency. Houses should be provided as far as possible for the operatives, but this should not be made compulsory. The nascent condition of industries in India, so miserably poor a country just at present, deserves special encouragement and support from all sides, particularly from the State, and in all ways, especially through the imposition of regulations not too hard and fast. I would not put any limit on the working hours of adults. The physique of the workers has not been affected by long hours. If they are to be limited, working hours should not be less than 15 hours, inclusive of the recess. The best method would be to keep regular time books. The starting and stopping times should not be fixed. The engine should stop for half an hour at midday. Twelve hours' work for adults should not be enforced, for they already do not practially put in more than 12 hours' work in a working day of 15 hours. They are neither always attentive, nor regular, and waste a good deal of time. They, being ignorant, do not possess the same sense of responsibility as do the work-people of European countries. There is another point to be considered, *viz.*, that the work people here do not continue at their work for the whole year round, but run away, for months together, in times of good harvests, which fact explains the shortness of competent men. There has been no physical deterioration of young adults visible at all, and there is no need of creating a new class of "young persons." The employment of women at night should not be prohibited especially in ginning factories which do not work the whole year round. The age for children should not be raised. In factories such small children are given very light work. If they be kept out through any such restrictions, they would be sent by their parents elsewhere, and would probably be compelled to engage in work harder and more risky. There should be no necessity for a second examination when a boy's age has been once certified at his first examination. Factories may be guided by their previous certificates. Regular sets for the employment of children should not be prescribed. There should be no such interference with the internal management. Factory owners should not be required to provide education, unless the Government make elementary education free and compulsory Non-working children should not be admitted to dangerous parts of factories. The mill manager should adopt whatever method he thinks best to secure this. There can be no objection to testing samples of air, so as to fix a standard, but only as far as practicable, making due allowance with reference to exsisting mills and their surroundings. An attempt should be made to fix a standard of moisture, and to determine a standard of purity for humidifying water. The standard of latrine accommodation should be fixed at one seat for 25 workers, and separate urinals should be provided. Doors should be hung so as to open outwards. All necessary fencing precautions have already been taken. All rules must vary according to local conditions: uniformity throughout India is not desirable. There seems to be no necessity for full-time medical inspectors.

Rai Bahadur Sri Krishn Das.

Oral evidence.

Witness stated that he had had eighteen years' experience in the cotton industry in Delhi. He did not recollect whether they worked day-light hours at the commencement; but if they did do so, it was not very long before electric light was introduced. In the cold weather they worked from 6-15 A. M. to 9 P. M., with half an hour's interval, and in the hot weather from April to September from 5 A. M. to 7 P. M. They never worked by electric light in the cold-weather mornings. They were only insured for three hours' work at night, and if they worked beyond 9 P. M., then it meant an increased insurance premium. If the operatives worked as they ought to work, then a day of 13 or 13½ hours would be enough. The idling was not on account of the long hours. The Delhi hands were naturally idle, and would not improve with a 12-hour day. In Delhi coal was dear, and the cotton was inferior, as the best cotton went to Bombay. The freight on cotton from Bombay to Delhi is higher than the freight from Delhi to Bombay. Consequently long hours were necessary. Labour was scarce, as the higher castes objected to mill. work, and the lower castes preferred open-air employment. More mills were being erected, while the mill population

Rai Bahadur Sri Krishn Das.

did not increase in proportion, and many have died from plague. A 12-hour day would affect them adversely, as their profits would be less. In the course of 12 hours the hands would not work more than 10 and the owners could not be stricter with them. He did not know whether a 12-hour day would mean the closing down of the Delhi mills. Other factories worked much longer hours than cotton mills, notably iron works and sugarcane presses. His mill always stopped on Sundays. The creation of a class of "young persons," with hours limited to 12, would injuriously affect them, because it would mean that the mill could not work beyond 12 hours. A fixed 12-hour day throughout India would also seriously injure them. Cotton operatives came to Delhi from Cawnpore, but not from Agra, because Mr. John was a strong man and prevented his hands from leaving. *Dasturi* might be prevalent, but he did not think that the jobbers charged the hands on purpose, so as to make more money for themselves. The scarcity of labour applied to the bazars as well as to the mills. The mill stopped early in the evening in the hot weather, because it was very hot, and the hands were not able to continue at work. No electric light was used in the hot weather. If the working day was restricted, then he approved of exemptions for late working on special occasions being granted.

WITNESS No. 267.

Rai Sahib Girdhari Lal, Delhi.

Rai Sahib Girdhari Lal.
Written evidence.

I represent the Jumna Spinning Mill owned by Saran & Company, Limited. The number of workmen is 574, besides some 30 peons and cart-drivers and some 15 clerks, in all 620. The average is 600. In this number there are 46 females and 92 children. Our mill has been working since the 1st July 1903 or 4¾ years in all. We have systematic statements only for the last 3 years, during which period we have worked at an average 13 hours and 15 minutes. In no year have we worked more than 309 days. As we spin from the cotton purchased locally, we do not spin more than 16*s*. And as our cotton is short-stapled we do not spin either fine counts or waste. The statistics of production which are available are as follows:—

Working day of	Production *per* spindle *per* hour of 10*s*.
12 hours	·380 ozs.
13 ,,	·384 ozs.
14 ,,	·390 ozs.

NOTE.—The above statement includes both ring and mule spindles, as no separate accounts are available.

It is necessary that time should be allowed to half-timers during which they may work in the mills pending examination for a certificate of physical fitness and age. One month or 3 weeks' time is a reasonable period. The present arrangement for medical examination is satisfactory, and may be continued. I agree that no half-timer should be permited to work as an adult, unless medically certified as physically fit for full-time work. And the safeguard which is practical in my opinion is that every adult who has recently passed the limit of children's age under the Act, should be required to produce the certificate of age and physical fitness, before being employed as an adult in any similar mill. There is no necessity to create any class of "young persons." If any law be made creating such a class there shall be a great deal of botheration and trouble. In the mill which I represent there are some 35 boys between the ages of 14 and 16. In my opinion there should be no restriction of the working of the factory as regards time, but if the Government decide to restrict the hours for adult male labour, it should only be provided that they may not work more than a given number of hours. The other details should be left to the discretion of the individual employers. There is no necessity to recruit factory inspectors for India from United Kingdom, neither is there any necessity that they should be trained in England. The factory inspectors of India should be Indians, or those who are well-conversant with the life and habits of Indian workmen. Mill hands, like any other members of the community, are provided with their own house accommodation and there is no complaint whatsoever especially in this part of the country. The question of house accommodation only arises where the factory is situated at a distance from a town or village.

The working hours of adult males should be limited; they should not be allowed to work as much as they can in accordance with their own free will. The price of the necessities of life has increased very much in the last decade; it has become doubled if not tripled in the case of wheat, rice, and other eatables. As it is they find great difficulty in making ends meet. If the working hours be limited, they would get less wages and consequently their purchasing power would be affected: and thus their health would suffer instead of being affected by working long hours, to which they have been habituated by working through a long course of years. They get about 60 days holidays in a year, and a recess of half an hour daily, and pass about an hour or so in attending the calls of nature, and in smoking; besides this, they absent themselves from the factories on different excuses. As a matter of fact they do not pass more than one-third of their time during the year in the factory. If hours are to be limited they should not be less than fourteen out of 24 hours, 10 hours are quite sufficient for rest, etc.; no method other than that hitherto enforced need be prescribed as regards the women and children except proper and constant supervision. Hours of working depend largely on locality, season and climate as regards which there is a good deal of diversity, and it should be left entirely to the persons in charge of factories to fix the laws. The engine may be stopped for half an hour about noon, and as a

matter of fact this practice is usually observed in most textile mills in working on the shift system there should no restriction as to the stopping of mills, except that men should not work in a mill more than 12 hours in 23 hours. There seems to be no reason why the mill should be altogether stopped, except on Sundays and recognised holidays, or why it should not be kept working day and night like any other industry such as flour mills, etc, allowing one hour for rest. There is no necessity of creating any intermediate class of workers, and restricting their hour of working; if there has been physical deterioration in the case of children employed between age of 12 and 14, a strict observance of the law should be enforced. There is no necessity to keep a special register of young workmen (between the ages of 14 and 16) as it will result in no good, and will not facilitate enquiries regarding the physical fitness of the youngest adults. The employment of women at night may be prohibited, except in ginning, which is a special case. The minimum age for children should not be raised beyond nine, for if there is any new restriction the parents will send their children to any other work where there is no restriction of age. That work may be more risky and harder, and thus the textile industry will suffer for no reason. Rai Sahib Girdhari Lal.

There is no necessity to fix children's sets by law; it should be left entirely to the discretion of the officer in charge of the factory. He should be asked to keep separate registers of different sets of half-timers, but the power of changing the name of one boy from the morning set to the evening set, or *vice versa* should be left entirely in the hands of the officer in charge of the factory. If the Government makes education compulsory and free for all, then, and then only, factory owners may be obliged to provide for the elementary education of the children working in their factories. As a rule the class of persons who work in factories do not wish to have any education, except in their own line of business. Non-working young children should not be allowed to accompany workmen into the dangerous or unhealthy parts of factories, and the manager or the man in charge of the factory should be asked to observe this rule as strictly as possible. There seems no necessity for testing the samples of air taken from factories, in order to prescribe an analytical standard of purity of air, with a view to secure proper ventilation. In reality, all mills and factories are properly ventilated. In the same way there is no necessity of prescribing a standard of moisture for the air in factories, with reference to manufacturing process and to the health of workmen, as in practice the manager of a mill keeps a proper standard of moisture, without which they cannot work properly. No standard of purity for the water used for humidifying purposes can be fixed, without much difficulty, which is undesirable. The water available may be used with some amount of care and caution. The standard of latrine accommodation may be raised to one seat for 25 workmen, and separate urinal accommodation may also be provided. In the case of factories to be erected, it may be insisted that all the doors of the working rooms shall be hung so as to open readily from the inside outwards, in case of fire. No further precautions are necessary for fencing machinery in any factory or class of factory, because such necessary precautions have already been taken by the makers of the machinery themselves. It is extremely difficult to secure uniformity in the administration of the Factory Act throughout India, for the rules of different Provinces ought to differ according to the different circumstances of the Province, such as education, climate, habits and customs, etc. There is no necessity of appointing any full time medical inspectors of factories. If Government appoint a staff of ill-paid petty officers who will visit the mills now and then, they will trouble the factory owners, and will be abhorred. Instead of doing any good, they will be liable to do harm.

Witness stated that he had been managing director of the mill for about four years. The longest day in the cold weather was 14 hours of actual work, but the hands actually worked only for 12 hours of this time. They had a pass-out system, but could not be stricter with the men than they now were. The mule spinners were paid by piece-work, and the extra hands received a daily wage, which was paid by the mill, so that the spinners received the benefit, as their earnings were estimated on the total production. There were always five persons on a pair of mules. Under his electric light insurance policy he could use the light whenever he desired Long hours were worked in the cold weather, because it was comfortable inside the mill. The work people did not show signs of exhaustion in the hot weather, and were as lively as in the cold weather. The best months for spinning were July and August, and the worst May and June. Occasionally the men struck, and they had to be coaxed and threatened before they returned to work. The Cawnpore workmen were superior to the Delhi operatives, who were idle. The average wage was Rs. 10 a month, and just as good wages could be earned outside a mill. The Delhi men would work better by contract than as day labourers. With a fixed 12-hour day production would suffer, and this would affect both owners and men. In order to compete successfully with Cawnpore, they had to work long hours, for they had inferior cotton and dear coal. They were unable to spin beyond 16's, as all the best cotton went to Bombay. His yarn was sold locally for hand looms; the Swadeshi movement had not helped them. A new mill in Delhi made a profit for the first few years, but then the profits decreased. He considered that the Delhi mills were working economically. He was of opinion that the law regarding half-timers should be enforced. In so far as the law had been evaded, this was due to the scarcity of hands. They proposed to introduce looms into the mill, and he anticipated no difficulty about getting hands, who were always attracted by anything new. Wages were always paid by the third week of the succeeding month. He thought this was the custom in all cotton mills in Delhi. Bonuses were offered to certain of the better hands as an encouragement. He saw no necessity for laying down a standard of purity of air. In the month of September fever was very prevalent; they did all they could to safeguard the health of their hands. *Oral evidence.*

Witness No. 262.

Rai Bahadur Lala Sheo Parshad, Delhi.

In my opinion no limit on the working hours of adult male should be imposed, neither has the physique of the workers been affected by long hours. The working hours should be not less than 15, including the recess. The proprietors should be asked to keep a log book in the engine Rai Bahadur Sheo Parshad. *Written evidence.*

Rai Bahadur Sheo Parshad.

room. The time for starting and stopping should not be fixed. The engine should stop for half an hour between noon at 2 P.M. Men in India do not work for more than twelve hours in any one day of 15 working hours; the reason for this is that they are too ignorant, and spend a good deal of their time in wandering about and in being inattentive to their work. Further, the commission ought also to consider the point that all the workmen in the mills are from the villages. No sooner is there a good crop, or the time of the harvest comes, than they run away to their villages for months together, and sometimes they never return. Hence the scarcity of labour of which almost all the mill-owners complain. There is no deterioration visible due to the illegal employment of children as adults, and there seems to be no necessity for creating a new class of young persons, or to keep a register of all workers under 16. Women should not be prohibited from working at night. In ginning factories especially there should be no prohibition whatever. The age for children need not be raised. The factory owners give children very light work. and if these restrictions are made then there is no doubt that they will be sent out by their parents to places where they will be given work harder and more risky. Certificates of age and physical fitness for children should be obtained. When a child's age has once been certified, there is no necessity for a second examination. The internal management of the factories should not be interfered with by prescribing definite sets for children. Non-working children should not be allowed in dangerous or unhealthy parts of factories. The mill managers should enforce this by whatever method they think suitable and necessary. A standard for air may be fixed, after making due allowance with reference to the present mills and their surroundings, so also a standard of moisture, and of purity for humidifying water. The latrine accommodation should be increased to the standard suggested. All doors should be hung so as to open readily outwards. All necessary precautions for fencing machinery are already taken. Uniformity on the administration of the Act is not desirable, because all mills vary according to their local conditions. The present inspectors being quite sufficient, there seems to be no necessity for full-time inspectors. I represent the Delhi Cloth & General Mills Co., Ltd., the Hindu Ice Co., Ltd., and the Hindu Biscuit Co., Ltd. In the mills we employ 676 men, 45 women, and 59 children. We have almost always worked the mills for more than 12½ hours a day. The production of the mills *per* spindle is in direct ratio to the number of working hours. If the production is more the waste is also bound to be more in the same proportion. If the production is more, the profits in the long days will be still more, on account of the initial cost being the same. If certificates of fitness are required, it is quite necessary to allow the employers to work the children for a month or a month and a half without certificates. The present arrangements for medical examination are quite sufficient and adequate A second examination of half-timers before giving them full-time work is undesirable and impracticable. Children should produce the certificates of fitness as half-timers which were granted to them first, before they are taken in. If they fail they should be examined. A class which would be neither half-timers nor full-timers, implying that their services could be utilized with neither of these should not be created. This class would be injurious to the factories in two ways, *i.e.*, they will not be able to get full sets of such workers, which means curtailment of the number of hours, and they will not get the full-timers wages, and half-timers wages will not satisfy them. Thus they will run away and the work will suffer. The number of women and half-timers, and the proposed young persons, will be so large that as a matter of fact the fixing of hours for these classes will really mean determining the number of hours the mills working. The probable percentage of young persons would be in my opinion more than 35 per cent. of the working staff. I do not approve of any time limit for adult male workers being fixed at all But if the hours be fixed, it would be better to leave it to the discretion of the employer to settle the time for the commencement and termination of the day's work. Ginning factories, presses, biscuit factories, ice factories, &c., should be meted out exceptional treatment, as they do not work all the year round, and sometimes have to work day and night. Inspectors, instead of being trained in the United Kingdom, should be trained in India, where they have enough field for that, and also where they must learn the language of the country, the habits of the workmen available here, the climate of the country, and other attendent circumstances. The law at present in force is stringent enough, and should not be made more so. Elasticity must be observed in every law. For instance, according to the books the mill ought to have closed at 7 P. M., and an inspector comes after 7 P. M., and finds the factory working, simply because the engine for some reason could not work, and had to be stopped for some time. In such a case there ought to be no prosecution, but only a warning instead of a long trial and the trouble of proving in court that it was really for making lost time, and not for working over-time. Factory owners should provide houses as far as possible for their workers, but they should not be obliged to do so by law. The work-people now a days can command their own terms in every respect, and oblige the employers to listen to them by general strikes, so the rules should not be very hard.

Oral evidence

Witness approved of a 15-hour day, including the recess. He considered that time suitable, because the operatives did not work continuously all that period. In other trades, such as cloth shops for example, they worked up to 18 hours. There was a cloth shop under his house which opened at 7 A. M. and did not close until 12-30 or 1 A. M. If a 12-hour day were fixed, he saw no prospect of the men's work improving. He had seen no mills outside Delhi. The Delhi men had got into indolent habits, and this was so in every trade in Delhi. They were idler than any workers of whom he know; they took no pride in their work; they were an indolent lot; and nothing better could be expected from them. He was not in direct charge of his mill, but he frequently visited it, and always found many men smoking and idling in the compound. In the 13 hours day the men will not work 11 to 12 hours. When the industry started in Delhi he tried a 12-hour day, and the production was very low. Even with the present day they could not obtain five ounces a spindle, and if the day was shortened, the output would suffer. If a Cawnpore mill could obtain five ounces in a 12-hour day, he could only say in explanation that Cawnpore had not such lazy operatives as Delhi. The hands were cultivators by profession, and were very casual in their attendance, absenting themselves whenever they pleased. They had nearly half their staff Cawnpore men, who being indolent left their native places, and followed the example

he Delhi men, and became just as idle. The hands as a rule took one meal at noon and one e evening after dark. Generally they had a light meal in the early morning. If a man was oyed on hard work in the mill, he might feel the want of food, and go out before 12 o'clock. lid not know if half-timers in his mill were employed on full time, but if this was so, the practice be due to the scarcity of labour. He considered that the cultivators preferred outside loyment to mill work. People were not used to mill work, and were frightened when they to work with machinery. The labourers in that district were extremely conservative, and rred work to which they were accustomed to any kind of new work. The system of *dasturi* not prevalent. As a matter of fact, they had to pay the hands their railway fare to Delhi itice them to work. Employers had to please them in all possible ways. Opium-eating was generally prevalent, and only from 10 to 15 *per cent.* took it. He paid some of the employees lvance, once a week, on Sundays, when they come to clean the machinery, but distributed the es and salaries monthly, as a rule. Rai Bahadur Sheo Parshad.

WITNESS No. 269.

Lala Bisheshar Nath Geola.

I am the proprietor of the Geola Ginning Mills, Delhi. The numbers of men and women lly employed in the above factory are— Lala Bisheshar Nath Geola. *Written evidence.*

(i) Women	...	...	...	...	28
(ii) Men, skilled	...	...	...	...	14
,, unskilled	...	...	...	...	15
(iii) Children	...	...	...	...	*Nil.*

The factory works every year between 3 to 4 months: *viz.*,—November, December, January February, but with a good cotton season it may work for 5 or 6 months. The usual working s are from 6 A. M. to 12 noon, and from 1 P. M. to 7 P. M. The females get a further interval minutes each during each working period. The average number of hours during which one male works during the 24 hours is 12. The skilled labourers have sometimes to work an extra in effecting repairs to machinery, if damaged. The Factory Act is already applicable nning factories and presses in Delhi and its suburbs. In my opinion the rule of closing on lays should not be enforced in such factories, as they work during 4 or 5 months only in a depending chiefly on the cotton crop. I am not in favour of the suggestion that women ld not be employed on night work, for the following reasons:—

(*a*) The work given to them is of a very light nature; generally they keep sitting.

(*b*) The work given to them can only be done by them; if men are employed on that work it would mean extra expense, and no, or very little, profit.

(*c*) Women of the class who work in the factories, if unemployed, grind corn at night with rough country stone mills, and grind as much as 12 or 13 *seers* a night, or they gin cotton with handlooms or pull punkhas. These are all comparatively harder work than that given to them in the factories. Generally, the practice is that if the factory works for more than 8 hours in the night, every woman brings a female relative of hers to help her, and thus she manages to get a sleep of 6 or 7 hours. The cotton season being the winter season, the nights are long, and if women are prohibited from being employed on night work the cotton industry would be badly and materially injured. As far as my factory is concerned, the main shaft is situated quite separately in the ginning mills. Only the oil-man and the *mochi* (who mends the belting) go near it while it is in motion, and I think it absolutely unnecessary to have the shifting cased in between the drums; women generally do not work before an opener. There have been no accidents in my factory since I have been its owner, *i.e.*, since two years.

Witness stated that his gin contained 22 single gins and three double gins. He never worked *Oral evidence.* a at night. Delhi was not the centre of the cotton crop, and very little raw cotton came to ıi to be ginned. Should the harvest improve, then it might become necessary to employ females ight, and so he should object to a prohibition against their working at night being included in Act. The women earned from 2½ annas to 3 annas a day. In his opinion ginning should xempted from the Sunday holiday, as it was a seasonal industry. He had no electric light, but ıere was a break-down, he worked up to 9 P. M. by candle light. If the working hours were ricted, the men would not be able to maintain the same gross production, and their wages would ess. They would then become dissatisfied. It was only by working 14 hours that they could l their own against other cotton centres where cotton of a superior quality can be obtained. He seen no mills other than those in Delhi. He was recently on the directorate of the Krishna ls. The idleness there, and the high cost of production, were not due to inefficient management. Krishna Mill had changed its manager six times in five years, because the manager could not the directors a good enough production. Taking all things into consideration, however the hours, the quality of the cotton and the climate, he thought that the Delhi operatives were entirely to be blamed for the present state of affairs.

WITNESS No. 270.

Mr. J. C. Read, manager of the Delhi and Northern India Flour Mills, Delhi.

Witness stated that they had 90 hands, in two shifts, working inside the mill, and 100 hands Mr. J. C. Read. side. They worked double shifts from April to June, and if a night shift man failed to appear, *Oral evidence.*

Mr. J. C. Read.

then the 12 hours were split up between three of the day shift men. The shifts changed at 6 o'clock, and alternated weekly. When the mill worked for 16 hours the sets worked from 6 A. M. to 6 P. M. and from 10 A. M. to 10 P. M., thus doubling eight hours of the day. At such times, however, some of the inside mill men helped in the outside work. Two complete inside shifts were kept the whole year round, and even if the working day was one of only 12 hours, he could still find work for them to do. No man in the mill even worked more than 16 hours at a stretch. In the wheat cleaning department the dust was expelled by means of hot air. Many of their hands came from Ulwar. Flour mill work was easier than cotton mill work, and the operatives much preferred the former. There was a certain amount of sleeping at night; the production then decreased 10 per cent., as compared with the day. He considered a fixed 12-hour day a good sound principle to adopt. He should like an exemption for flour mills, however, to meet the contingency of a night shift man not appearing. The hands were not anxious to work beyond 12 hours, even for the extra pay. The operatives never worked consecutively for 24 hours. A compulsory midday stoppage would cause great loss to a flour mill, which, while it worked, was a continuous process. In the case of the 12 or 16 hours' day they stopped feeding the hoppers at a certain hour, and the mill gradually emptied. Starting again in the morning occupied half an hour. If they had to stop all of a sudden, the pipes became jammed, and many of the machines would not work. A midday stoppage of half an hour would mean a loss of one hour at least to a flour mill. The hands did not want this half hour, because they went out as they liked. All hands came on Sundays, up to 10 A.M., for cleaning machinery, and the monthly wages included this Sunday work. Wages were not cut for holidays, and in the event of a holiday being given, they only worked on Sundays, if there was a demand. Their average working days were 300 a year. If they were prohibited from cleaning on Sundays, this work would have to be done on Mondays, and the mill would not start before noon. He knew of no grounds why flour mills should be specially exempted so as to allow them to clean machinery on Sundays.

Note.—The witness did not submit written evidence.

WITNESS No. 271.

Seth Kanhiya Lal, owner of the Hanuman Mahadeo Spinning Mill, Delhi.

Seth Kanhiya Lal.
Oral evidence.

Witness stated that in the cold weather the mill worked an average 14½ hours' day, excluding the one hour interval at noon. The hours were from 6 A.M. to 9 P.M. or 9-30 P.M. In the hot season they worked from 5 A.M. to 7 P.M. There were about 90 children in the mill, and some were working full time. A fixed 12-hour day would seriously injure the mill, for production would fall from 7,000 lbs. to 5,000 lbs. Since the Commission inspected his factory, he had tried an experimental day of 12 hours, and the production had never been over 5,000 lbs., whereas previously it was always 6,000 lbs. The workmen might improve somewhat in application with a 12-hour day, but improvement would not be sufficient to compensate for the loss of two hours' production. He did not have so much objection to a 13-hour day, which meant 12 hours of actual work. They had great difficulty in getting hands. They only worked on Sundays to make up for a holiday in the week; the machinery was cleaned on Sundays. His ginning mill was worked with the cotton mill, and the women worked from 6 A.M. to 9 P.M. at times. Extra hands were employed, and the women did not come so punctually to the ginning as they did to the spinning. The extra hands in the mill are paid separately, and do not have any share in the piece-workers' earnings. He did not know whether children under 14 years of age were employed on full time in his mill. If this happened, it was not by his orders. They could not work such long hours in the hot weather, because the heat at night was very great.

Note.—The witness did not submit written evidence.

The President and Mr. Chitnavis visited the dwellings of some of the mill hands at Delhi on Sunday, the 5th April 1908, and recorded the following statement on the spot:

Evidence of mill operatives.

Twenty-five mill hands working in the Krisha and Delhi Cloth and General Mill, Delhi, stated as follows:—We strongly object to the long hours worked in the Delhi Cotton Mills, and would welcome any law restricting us to 12 hours' actual work a day. This is the unanimous opinion of all the mill hands in Delhi. When the mills do not stop till 9 or 9-30 P.M., we have not enough time for sleep, and have no leisure at home. Many men fall sick from the strain, and leave the work. Most of us were brought to Delhi from Cawnpore by former mill managers and stay on in Delhi because we have made it our home now. We are sure that the production in a 12-hour day would be equal to the present production, though there might be a slight falling off at first.

AMRITSAR.

WITNESS No. 272.

Mr. W. S. Hamilton, I. C. S., representing the Government of the Punjab.

Mr. W. S. Hamilton. *Written evidence.*

There is no special establishment for the inspection of factories in the Punjab. District Magistrates and Civil Surgeons are the factory inspectors for each district, and the Director of Land Records, his two Personal Assistants, and the boiler inspector under Punjab Act II of 1902, are inspectors for the whole province. Assistant Commissioners and Sub-Divisional Magistrates are joint inspectors for districts, and the Sanitary Commissioner for the province. The present system of factory inspection has not hitherto worked satisfactorily, chiefly because little attention has been paid to the matter. Factory inspection has been neglected owing to the factory inspectors having much more important work to do. Moreover, the inspectors have not been given sufficient guidance in technical matters. The system is suitable enough for the needs of the province, and with the closer attention that is now being paid to industrial matters the working of the factory inspectors will speedily become all that is required. The present *ex-officio* inspectors are quite adequate in number. Any increase of inspectors would lead to unnecessarily frequent visitation of factories. Where the present staff fails is in technical knowledge and experience. The case of the three cities of Delhi, Lahore and Amritsar must be considered separately from the rest of the province. In them there are spinning and other mills for which some professional inspection is certainly required, if due observance of the orders of Government as to such matters as ventilation and the fencing of machinery is to be obtained. Amateur inspectors can never have sufficient confidence to pass orders as to these matters in cases where any order must entail considerable expense for the owners of the factories. There should be a professional inspector to visit each factory in these towns twice every year. Elsewhere the factories are chiefly for cotton ginning, and are small, and the present inspectors would be sufficiently equipped for their inspection if they were provided with a manual of instructions as to what are the minimum requirements to be insisted on in ginning factories in respect of the fencing of the machinery, ventilation, the prevention of fire, and so on. There is no advantage in centralizing factory administration throughout so large an area as India. Local Governments can be trusted to carry out the general instructions issued by the Government of India, and to vary them only so far as climatic and other local conditions make modification necessary. Authority as to details should be left to the Local Government, who are the best judges of the way in which the principles should be applied to local conditions. Whole-time medical inspectors of factories are not wanted in the Punjab, where factories are not yet very numerous, and are generally of a simple type. Civil Surgeons have time enough to certify the ages of children, as the number of children employed is very small. Some temporary help might be required for the Civil Surgeons of Delhi and Lahore if the compulsory certifying of children is introduced. The following amendments of the Factory Act, other than those indicated elsewhere in these replies, seems to be required :—

(i) The "occupier" of a factory should be defined so as to include both the owner or lessee and the manager, and section 17 should be modified so as to maintain the responsibility of both owner or lessee and manager in all cases of breaches of the act or rules.

(ii) The keeping up of a register of attendance should be made obligatory, but occupiers should be exempted from showing in such register as "employed" in the factory workers who are engaged and paid by contractors, provided they do not work on the machinery nor within the covered part of the factory.

The working hours of adult males should not be limited; for, owing to the leisurely way in which work is done in India, and to the frequent stoppages for a smoke or a drink, and so on, the nominal hours of work are no gauge of the physical energy expended. The normal working hours in the Punjab are from 6 A.M. to 7 P.M., with an hour's rest, or twelve hours a day. These hours are not longer than the customary hours of independent labourers. As most of the factories in the Punjab are cotton ginning factories, which work for a few months only in the year, the physique of the workers has not been affected by long hours. If hours are to be limited the maximum working day should be of twelve hours. The hours most in accordance with present practice would be from 6 A.M. to 7 P.M., with an hour's interval for rest at noon. There can be little doubt that children under 14 years of age are constantly employed as adults. Whether there has been physical deterioration of the children so employed cannot be ascertained. There would be considerable practical difficulty caused by the creation of a class of "young persons", and managers would probably prefer not to employ such persons at all. Moreover, in the Punjab there would be few of them. The object aimed at would be better attained by requiring that no person under 16 years of age should be employed as an adult until certified to be over 14 and to be physically fit. No special register of persons under 16 is required if such persons are required to produce a certificate of physical fitness before being employed as adults Children are not so numerous in any Punjab factory as to make it difficult to detect cases of children being worked as adults Women should not be employed at night, as the necessary consequence will be neglect of their children. It is not the practice in the Punjab to work ginning mills at night, so the prohibition of night labour for women will not have injurious industrial effects. It is unnecessary to raise the minimum age at which children are allowed to work in factories, for Indian children are more precocious than European children and employment in factory premises usually means for them a change from less to more sanitary and healthy surroundings. If they were not working in the factories they would probably be working for longer hours and under dirtier conditions. No child should be allowed to work in a factory till

Mr. W. S. Hamilton. *Written evidence.*

he is certified to be over nine years of age, and also to be physically fit. The certificate of physical fitness is necessitated by the difficulty of correctly ascertaining the ages of children in this country. One constantly sees children with certificates whose ages, to the non-medical observer, would seem to be much below those certified. The explanation may be that children are abnormally puny or undeveloped. Such children would be saved from factory labour by the necessity of producing a certificate of fitness. Children who have worked as half-timers should be required to produce certificates both of age and of physical fitness before they are employed as adults. In this way any physical deterioration of children employés will be detected and checked. It should be prescribed by law that children shall not be employed except in regular sets, otherwise it is quite impossible to control the management in their employment of children Factory owners should not be required to provide elementary education for their children workers. The children of the class employed would not be educated, if they were kept at home or if they worked in any other way, so there seems to be no reason why the expense and trouble of educating them should be laid on the factory owners. Moreover, the knowledge that they would have to go to school would probably keep children away from factories, and reduce the already inadequate supply of child labour. Workers should be prohibited from taking non-working young children to the machinery, and to ill-ventilated parts of the factory. The prohibition can be enforced by requiring owners of factories to provide a suitable house of shelter where children can remain while their parents are at work. This is already done in some factories. The occupiers should be responsible if children are found within the factory building. The prescribed latrine accommodation of one seat to fifty employés is usually exceeded in the Punjab. Probably one seat to fifty is sufficient, as the operatives prefer to ease themselves in the fields. Separate urinal accommodation is not required. What is important is that every occupier should be required to keep a sweeper, and to have the latrines furnished with pans, and should be responsible that workers do not ease themselves in the open factory compound. Doors are usually kept open, so it does not much matter whether they open inwards or outwards. It should be laid down that there must be at least two free outlets with an easy flight of steps from every ginning room, other than the way into the engine room. Only a professional man can say whether further precautions as to the fencing of machinery are needed. The line shafts of ginning mills are never fenced at present. Clear instructions with diagrams should be issued for the guidance of non-professional inspectors, showing exactly the minimum of fencing to be insisted on in the case of the commoner forms of machinery. At present these inspectors do not know what orders to give as to fencing.

Oral evidence

Witness stated that the opinions expressed in his written evidence represented the views of the Local Government. Until August last, the law as regards half-timers was not enforced in the Amritsar Cotton Mill or in the Lahore mills. Prosecutions had been threatened in several cases, and it was hoped that these threats would have the desired effect. Until the beginning of the current year the Act, in his experience, was not enforced in practice. It was difficult to say whether the Act was obeyed as regards women. He considered the system of employing a few extra women and having unstated intervals of rest as most unsatisfactory. He had not laid down any particular standard to govern the employment of these extra hands. The gins in the Punjab did not work at night. Until recently the inspection work had not been strictly carried out. The Deputy Commissioner and Civil Surgeon visited the factories, but the *ex-officio* inspectors could not do the technical examination properly. While he would still maintain the inspection by local officers, he approved of a special inspector being appointed for Lahore, Amritsar and Delhi. There was not enough work in the province for one special inspector, unless ginning was included, and so he thought that the United Provinces inspector could come up occasionally and do all that was necessary in the Punjab. Witness did not approve of the duty of inspecting being taken away from the Deputy Commissioner. He agreed with the centralization of inspecting work in so far as the object was to ensure an uniform interpretation of the Act throughout India. He considered a 14-hour day too long but thought that the general day was one of 12-hours. When he spoke of the normal working hours as from 6 A.M. to 7 P.M., he referred to ginning factories. Witness hoped that the term "occupier" would be clearly defined in the new Act; responsibility should not in any case be shifted below the manager. A register of attendance should be kept for all labour inside the factory; but he would exempt all labour in the yard, whether employed by the factory or by contract. The people who worked in the compound did ordinary casual coolie labour. He agreed that unless every person on the premises was presumed to be under the Act there might be some difficulty in detecting malpractices. Amritsar men would not work in the mills. Outside wages were high, and labour was absorbed in irrigation work and in other ways. The mill hands were a changeable population; but so far as he could see there had been no deterioration of health. In the Punjab it was usual to give one hour's interval at midday, but the hands did not take a big meal then. Both in the towns and districts it was customary for the people to take two meals,—one in the morning and the other in the evening. There were several cotton presses in the province, but he had never seen a press house opener. His objection to the "young persons" class was that it would lead to a multiplication of classes. If women and "young persons" were lumped together his objection would be reduced, but he saw no advantage in the proposal. It meant arriving at an object,—the restriction of adult working hours —in an indirect way. The certificate of physical fitness would cover the present difficulty about the "young persons." There were not many "young persons" in the Punjab, and the proposal would not have much practical effect one way or the other. If non-working children were prohibited from entering factories then the supply of labour would be interfered with. The factory workers were of low caste, and belonged to no special class. In one big mill at Lahore the *Sánsis*, a criminal tribe, were largely employed. The carpet manufactories were not under the Act, and many young children were employed in them. If a child was refused work in the mill he had merely to go to the carpet factory. No suggestion had ever been made to bring these factories under the Act.

WITNESS No. 273.

Mr. H. A. Casson, I.C.S., Deputy Commissioner, Amritsar.

Mr. H. A. Casson. *Written evidence.*

My experience of factories is very limited, being confined practically to inspection of factories at Amritsar during one year's tenure of the office of Deputy Commissioner. The rest of my service has been spent at places where there either were no factories at all, or such small factories that no conclusions could be drawn therefrom. I think, therefore, it may be a waste of time for the Factory Commission to consider my evidence oral or written. I however put down such conclusions as I have formed. I have personally observed no signs to indicate that the physique of workers has been affected by long hours. Unless the working hours of adults are limited, it is difficult for an inspecting officer to ascertain how many hours a man actually works. The manager may tell him that workmen relieve each other, but it is difficult to check this statement. As regards women, my impression is that they seldom get their full ($1\frac{1}{2}$) one-and-a-half hours off. If working hours are limited, a day of 12 hours would seem suitable. Except when working by shifts, I would suggest a working day from 5-30 A.M. to 6-30 P.M. or 6 A.M. to 7 P.M., and that the engine should be stopped for one hour between noon and 2 P.M. I have observed nothing indicating the necessity of the creation of a special class of workers corresponding to "young persons". I think the creation of such a class would be a worry to the management, and to inspecting officers alike, without commensurate advantages. Certificates of both age and physical fitness should be required before children are allowed to work in factories. A child may be nine years old and yet unfit, whereas another child of the same age may be quite fit. For similar reasons, before children who have hitherto worked half time are allowed to work full time as adults, certificates of both age and physical fitness should be required. I do not think factory owners should be obliged to provide elementary education for children at their own expense. The managers would, I think, consider such a provision a nuisance, and it is very doubtful whether the parents would appreciate the advantages of such education. Further, the six or seven hours of work in the factory is quite enough strain on the constitution of the children, and during the remainder of the day they should be free to be in the open air. I do not think a rule is necessary prohibiting children (non-working) from accompanying workers to dangerous or unhealthy parts of factories. I have never heard of an accident to a non-working child in the Punjab. The most dangerous place as a rule is the engine room, where ordinary working mothers do not go. Moreover, women are usually employed in places where the machinery is less dangerous than elsewhere. The result of a law such as is proposed would, if enforced, be to prevent working mothers from getting employment. I do not think they would come to work if debarred from keeping small children by them, even if a room were provided in the factory where such children could be looked after.

It should be prescribed that all doors of working rooms should be hung so as to open readily from inside outwards. There should also be at least two means of escape from every storey at opposite sides, so that if escape is cut off in one direction, it may be possible in the other. Extra means of escape should be provided also in proportion to the number of hands employed. I think that further precautions as regards fencing of machinery are necessary in most factories. All revolving wheels except such as must absolutely be kept uncovered for the efficient working of the factory should be protected with shields, movable or otherwise, of wire fencing or wire gauze. No workers should be allowed to work or utilize any part of the machinery till fully acquainted with the method of stopping that machinery in case of accident. I think that it would be well if instructions were drawn up as to what fencing precautions are necessary for various classes of machinery. Many inspecting officers are inexperienced in such matters and loth to order innovations which may to them seem advisable where their predecessors have been content to allow things to remain as they are. I am of opinion that inspection is more efficiently performed by a special officer who travels over a Province than by local officers who have little experience of such matters, little time to devote to them, and little opportunity of comparing the working of factories in their own district with that of those in other districts. Local inspections should continue, but as is the case in the Punjab a special inspector should also exist who should be a gazetted officer of high standing. I think it is not necessary that such an officer should have medical qualifications, though no doubt he would be more efficient if he did possess such qualifications. I think, however, that general standards of air, space, ventilation, latrine accommodation, &c., can be drawn up for the guidance of a layman, and that Local Governments should be free to appoint a medical gazetted officer or a civilian as they may find most convenient. Such officer need not be a full-time officer. Inspection of factories may be combined with other inspection duties, involving travelling about the province. Such inspecting officer must be of sufficient standing to be perfectly reliable.

Oral evidence.

Witness stated that long hours were worked in Amritsar, but he could give no opinion as to whether it was possible to restrict them. In explanation of the absence of local men in factories, a mill manager told him that the people of the district could not stand up at the machinery for the long hours worked. Mill labour had to be recruited chiefly from down-country Hindus. There was, however, a big demand locally for outside labour; and he did not think that a restriction of hours would bring in the local men to the mills. He understood that until lately inspecting officers had not succeeded in enforcing the law in respect of half-timers. His own inspections dated from 18 months ago, as he had only just returned from leave, but he had detected no evasions of the law then. The children when questioned always seemed ready with the proper answer. He could find time for such inspections. He thought that the Collector should still have the power to inspect, and that in places like Amritsar, where factories were not numerous, he approved of the appointment of a special inspector for the whole province. There were a number of small factories in Amritsar which were not under the Act.

WITNESS No. 274.

Lieutenant-Colonel Mulroney, I.M.S., Civil Surgeon, Amritsar.

Lieutenant-Colonel Mulroney. *Oral evidence.*

Witness stated that his experience of factory inspection work dated from 1887. It was only within the last five years that the age question had cropped up. Previous to that no children were sent for examination. It was difficult to say whether children were employed full time or not; one could get nothing definite from the children, but when he visited factories in the afternoon he judged from the appearance of the children that they had been working all day. It was difficult to tell in the case of an Indian whether he was overworked or not, unless one made a special examination. The mill hands were a sparer lot than the local people. The mill hands came from Oudh and Rajputana, and he was comparing them with the Punjabis. He had not observed any noticeable number of phthisis or other cases, but in the ordinary course mill operatives did not come to the hospital. Although the cotton operatives were of slighter build, he considered them quicker and more intelligent than the local people. Towards 4 P.M. the operatives were absolutely played out. He had seen the electric lights full on in the spinning mill at Amritsar about midnight. Sweating men like that must in the long run interfere with their longevity, and weaken their power to resist disease. That was his opinion as a medical man. He approved of a fixed number of hours per day; and the men could then work overtime if they liked. There should be no question as to whether the operatives approved of a fixed day or not, for they had to be protected against themselves. He had not detected any physical deterioration; when an operative fell ill he returned to his country, and witness could not trace the life history of any case. The other factories in the town which employed local labour worked as long hours as the mills. Carpet-making factories were not under the Act. The workers were seated at their task, but one could easily see that they were overworked. Consumption was common among them, but then consumption was also prevalent with that class of Kashmiris generally. Work in a carpet factory was mechanical employment, and should be brought under the Act. Children of five or six years of age were employed in these factories. The work was piece-work, and a parent would take a contract and employ all his children. If restriction was decided upon, then the length of the day to be fixed entirely depended upon the manager. If an owner had a good manager who worked his men properly, a 12-hour day would be too long. He would class the growing youths between the ages of 14 and 17 years as immature adults, and include them with women for a 10-hour day. Generally speaking, adult males could be allowed to work for 12 hours, but so much depended upon the manager. An English manager gets more out of his men, in a shorter time, than a native manager. The latter was not a hard task master, but in order to secure production, he prolonged the hours of work. The workmen appreciated longer hours and less intense work; and if short hours meant a reduction in earnings, he did not think the workmen would like the change. In order to protect the workers, there should be a restriction of hours, in any case as the present hours must do them harm. He had not consulted the work people about restriction. In regard to the fencing of driving pulleys on spindle frames, witness thought that wire gauze should be placed between the present bars. This would prevent the operatives' clothes from being pulled in. Greater attention should also be paid to the number of exits, in case of fire. He approved of fixing a standard purity for air, below which one must not go; but no standard could be fixed for humidifying purposes. Ventilators should be out of the reach of the workmen. In addition to reporting accidents which disabled a man for 24 hours, he thought that a daily register should be kept of all accidents, whether important or not. The manager should also be in a position to render preliminary first aid in cases of bad accidents. He had had operatives before him with burnt cotton stuffed into a wound, whereas the application of lint would have been the proper thing. The Amritsar mill had no dispensary; with small factories he considered that a dispensary would be too expensive. The physical fitness of a child should form part of the test before it was allowed to work. At present he insisted upon physical fitness in addition to age. Very few children would be rejected on the score of physical unfitness. In ordidary cases one seat in 50 was sufficient latrine accommodation, but where the operatives resided on the premises one in 25 was not sufficient, as the mill latrines were then the only latrines for the whole establishment.

Note.—The witness did not submit written evidence.

WITNESS No. 275.

Lala Sri Kishen, manager of the Amritsar Cotton Mills Company, Limited.

Lala Sri Kishen. *Written evidence.*

I represent the Amritsar Cotton Mills Company, Limited, Amritsar. There are 349 men, 31 women and 36 children in our mills. This mill has been working actually from $12\frac{1}{2}$ to $13\frac{1}{2}$ hours daily for the last eight years, and stops one hour daily at noon to afford rest to the workmen. The physique of our workmen does not seem to suffer in any way by working the mills for $12\frac{1}{2}$ to $13\frac{1}{2}$ hours, and in my opinion it is not necessary to shorten the hours, because our workmen work very leisurely. In addition to an hour's rest in the middle of the day they leave in batches, for about half an hour in the forenoon and for a similar time in the afternoon, for drinking water, smoking and other purposes, which means another hour's rest out of the working time, thus reducing the actual work to $11\frac{1}{2}$ or $12\frac{1}{2}$ hours. There ought not to be any young persons class, because a fourteen years' boy can work at the above rate for a full day without feeling exhausted. This can be easily proved, as the health of the mill hands does not seem to be worse than that of their fellow-workmen in the city. At the age of nine children are strong enough to work for 6 or 7 hours in a day without affecting their health in any way, taking into consideration the quality of the work they are entrusted with. Mill-owners should not be forced to provide education to the half-timers unless education is made compulsory throughout India, and even then the Government should provide them with free education. In the case of children, who are required to obtain certificates of physical fitness as well as of age previous to their employment in a factory, the employers should be allowed to work them for a month pending examination for the certificate. The medical examiner should attend the factory at least once a month, say on the last day of the month, to

examine the half-timers. A standard of humidity and ventilation in the mills will surely mean a better quality and quantity of the products, If the working hours are limited, it should be left to the discretion of the employer to work his factory at the time most convenient and suitable, in the circumstances. Lala Sri Kishen.

Witness stated that his practical experience of mill management dated from January 1907. His mill had never worked up to midnight. On one occasion this year there was a break-down, and after repairing the engine he worked it for five minutes at about 3 A. M. to see if everything was all right. That was the only occasion when the electric lights were on after 9 P. M. The operatives would not work after 9 P. M. in the cold weather. In the hot weather they worked daylight hours. If the men had to work a fixed 12-hour day throughout the year, in his opinion production would decrease; this would mean loss to both workers and employers, and it would take from five to ten years before they could work it up again to the present level. Loitering could only be prevented after years of effort, as the men were so accustomed to work in an indolent manner. He recruited his labour from Delhi and Cawnpore. The local men did not like mill work, because the mill was two miles out of the town, and employment there entailed getting up very early and arriving home late. The local men, too, were not trained cotton-spinners. The daily wage men received the same wages irrespective of the length of the day, and the piece-workers earned slightly less in the shorter hot weather days, but the difference was only a few annas per day. The hands cleaned up on Sundays, this work being included in the monthly pay; but if they worked after 12 o'clock, then they received two hours' pay for every hour worked. The mill worked on Sundays to make up for festivals; the total working days were a little over 300 a year Up to January most of the half-timers worked full time. Since then the law had been enforced, and they had had to shut down several ring framers. The enforcement of the Act had affected their supply of labour. He could not get individual children. A child would only come to the mill if his relatives were there. Many of the full-time boys left the mill rather than go back to half-time, and they were now working as coolies in the city. He had a pass-out system, one in seven, and the passes were always used. He gave one hour's interval in the middle of the day. Very few of the workers took their meal then. The majority had their big meal between 9 and 10 A. M., and a second meal in the evening. The hands left before the interval, and did not return punctually, so that the one hour generally meant one hour and-a-half. He could not stop this practice, owing to the scarcity of hands. *Oral evidence.*

Witness No. 276.

Mr. Girdhari Lal, Manager of the Amritsar Flour and General Mills, Amritsar.

Witness stated they undertook cotton-ginning, flour and rice grinding, and ice-making. There were 28 cotton gins and he employed 30 females on them. There were 17 men employed in the rice-husking. The ordinary working hours were from 6-30 A.M. to 6-30 P. M., with one hour's interval. The ice factory was a continuous process, and ran day and night when working. The rice mill never worked day and night, but the cotton-ginning and flour mills occasionally did so. Extra hands were always employed for this double work. On two or three occasions in the year they might work up to 10 P. M. with the same hands except in the ginning, where fresh women were always employed for the extra two or three hours. Women earned $3\frac{1}{2}$ annas a day on the gins, and $1\frac{1}{2}$ annas for the extra three hours. He had as a rule no difficulty in obtaining female labour for these three hours. A restricted day of 12 hours' actual work is objectionable, as it would be impossible to get trained labour to work by shifts, and consequently there should not be any restriction for overtime work in the case of adults when they are paid for it. The actual working hours a day should in no case be less than 12 hours exclusive of one hour allowed for recess, *i. e.*, the working hours should be fixed as from 6 A. M. to 7 P. M. every day with one hour off in the middle from 12 to 1 P. M. The restriction would tell heavily on the mills, and would handicap them in their working to a considerable extent. The seasonal mills, such as cotton ginning and rice husking, which are dependent on the irregular action of natural forces, the market and other incidental causes, should not be restricted to Sunday as a holiday, but should be allowed to close 4 days in the month in all. Men were paid 6 annas a day, and the wages were paid weekly. Cleaning of machinery was undertaken on holidays for half-a-day only, and the men received half-a-day's pay if on the daily wages list, and a full day's pay if on monthly wages list. The local men have their big meal in the middle of the day, and another one at night. The cultivators do the same, but a few might take a small meal in the morning when they can afford to do so. Mr. Girdhari Lal. *Oral evidence.*

Note.—The witness did not submit written evidence.

Witness No. 277.

Mr. Gurdat Singh, share-holder of the Amritsar Rice and Flour Mill, Amritsar.

Witness stated that his mill employed about 20 hands; they worked from 6 A. M. to 6 P. M., with one hour's interval at noon, for seven months in the year. The mill was closed during the remainder of the year. They ground flour and rice on commission terms. If they were very busy and had to work at night, he employed extra hands. A 12-hour day would not affect the industry; and he had no objection to the restriction. He was interested in the Amritsar Cotton Mill. He could give no explanation to account for the absence of local labour in the mill. There was no scarcity of hands for ordinary work in Amritsar. It might be that the mill was far from the town, and the people did not like having to get up early after a late return home. Mr. Gurdat Singh. *Oral evidence.*

Note.—The witness did not return the abstract sent to him for verification.

WITNESS No. 278.

Mr. Maharaj Kishan, manager of the Public Rice and General Mills, Amritsar.

Mr. Maharaj Kishan.
Oral evidence.

Witness stated that they did cotton-ginning, rice-husking and flour-grinding. The mill worked for about seven months in the year from 6 A. M. to 7 P. M., both in the cold and hot weather. There was always one hour's interval at midday. They worked by candle light up to 8 P. M., and at the very outside they never worked beyond 10 P. M. This applied to the cotton-ginning. They employed extra hands when necessary. The head woman arranged about the hands, and he did not see about that. There was plenty of employment to be obtained in the city, and so male labour for factories and mills was scarce. When the gins worked up to 9 or 10 P. M. the same engineer remained on duty. If the 12-hour day were introduced, he should engage another engine-driver, not another engineer. This would be for extra working for 2 or 3 hours in an emergency. He would apply the same principle to the whole of the mill staff. Sunday was observed as a holiday, but the hands came until 12 o'clock to clean the machinery. There should be no restriction of the hours of adult male labour. The manager should be allowed to close the mill for any 4 days in a month, and should not be required to close specially on Sundays.

Note.—The witness did not submit written evidence.

DHARIWAL.

WITNESS No. 279.

The New Egerton Woollen Mills Co., Ld., Dhariwal.

New Egerton Woollen Mills Co. Ld. *Written evidence.*

We would be opposed to the introduction of any legislation which would limit the working hours of adult males. It does not seem to us that there are any grounds upon which it might fairly be affirmed that legislation of this kind is necessary, and the aspect of the labour problem in this country, viewed as a whole, renders it eminently undesirable to put in force regulations which would operate unfairly against employers. The labourers themselves would in all probability resent interference with their liberty in this direction, particularly as, with an enforced shorter day, employers would be compelled to demand a greater amount of application from their operatives than is at present obtained. It is recognised on all sides that an Indian labourer does not work continuously during the whole time he is in the factory, and to be employed for 12 hours a day demands less from a worker in India than a period of 8 hours a day would from a similarly employed operative in England. Neither the same amount of manual labour nor the same attention to work is required from the Indian as is obtained from the worker at home. And it also seems to us that labourers can effectively protect themselves should employers anywhere endeavour to work them beyond a fair limit. The demand for adult labour is generally in excess of the supply, and if the conditions which obtain in one factory are too harsh the workers will quickly transfer their services to some more congenial place. The results of any legislation in this direction would in our opinion be deplorable. The hours worked by this mill average 10½ a day during the year, and as we have not worked the mill as a whole beyond these hours at any time during the past twelve years we are not in a position to say what has been the effect on the physique of workers by their employment for long hours.

The ordinary working hours mentioned above correspond with the actual engine (or turbine) running time, and make no allowance for the spells of rest taken by each labourer during the day. These latter we would estimate at about half hour for each labourer on the average, for all purposes. Some men would no doubt be absent from their work for longer periods, but the average would not in our opinion be above that mentioned. As mentioned above we are strongly against any limitation of working hours; but should it be decided to introduce legislation on these lines we would be in favour of a twelve hours' day, with an interval of one hour between 11 A.M. and 2 P.M. The range of hours suggested by the Commission is not sufficiently large to meet all requirements, and we would suggest that any twelve hours between 5 A.M. and 8 P.M. should be permissible, provided that the engine or turbine was stopped for one hour between 11 A.M. and 2 P.M. in order to grant an interval of rest to the workers. During a portion of the year we allow our workers an interval of 2 hours in the middle of the day; and it would no longer be possible to grant this, were either of the limits suggested by the Commission adopted, unless the present very moderate hours of employment were curtailed. We would also suggest that if the range of hours we have mentioned be adopted a suitable method for enforcing the restriction would be to order the factory owners to send to the local factory inspector at the beginning of each month a notice intimating the hours during which it was proposed to work the factory during that month. As the day shift system is not worked in this part of the country we are not in a position to make any suggestion regarding the working of the same. We have no knowledge of the illegal employment as adults of persons between the ages of 12 and 14, and we cannot therefore say whether there has been any physical deterioration which requires the creation of a class of "young persons" whose working hours should be restricted. We would, however, be inclined to favour the creation of a "young persons" class of workers, and would recommend that their employment be limited to 12 hours a day, which seems to us is all that could be demanded of them, without there being a danger of physical deterioration. Should it be decided not to create this class, we cannot see what would be the benefit of the special register of persons under 16. For unless the young adult under 16 was to be medically examined as to his age, and presumably this is not to be done if the class is not created, no register would be effective. We would advocate the prohibition of the employment of women at night, and would limit their working hours to 11 a day. It is our practice to allow our women to come in a quarter of an hour later, and leave a quarter of an hour earlier, than the men; and this holds good at the recess period as well as at the time of opening and closing the mill Our women therefore work one hour a day less than the men throughout the year, and their average working hours are accordingly 9½ a day. In this factory about 50—60 children are employed, but we might remark that we would prefer to do without this class. We have made repeated attempts from time to time to replace these workers by adults, but invariably we have found it impossible to do so. The majority of the children are employed as doffers and cleaners in connection with our worsted spinning frames, and we find that boys over 14 do not take kindly to this work. As a general rule the children employed by us are over 10 before being admitted to work, as we find children under this age are not so suitable from an employer's point of view. However, we would not be in favour of raising the minimum age beyond nine, owing to the difficulties which exist of ascertaining the exact ages of those presenting themselves for employment. We do not think that certificates of physical fitness should be required, as from our experience they are not in any way necessary. As mentioned above the work done by these children is of the very lightest kind; and the Indian child of nine, being much more fully developed than an English child of the same age, is well fitted to discharge the light duties imposed upon him, during 7 hours a day, and few if any employers would engage a child who appeared to him to be physically unfit. To call for certificates of physical fitness before half-timers who had reached the age of 14 years could be employed for full time is in our opinion unnecessary, and if adopted would work out unfairly; but we think that certificates of age might be required. It would be altogether unfair to impose upon factory owners the duty of providing elementary education for the children employed by them, as this is quite obviously a work for the State to undertake. Employers would for the greater part co-operate heartily with any reasonable requirements

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of the educational authorities to whom this work might be entrusted. We might, however, mention that this Company have for a considerable number of years undertaken this work as far as it was feasible for them. The late Mr. Milne, who was manager of this mill for over 12 years, took a keen interest in this question, and in order to perpetuate his memory and to carry on the work he had at heart the Company have erected a substantial building in the neighbourhood for school purposes. Elementary education is imparted at this school to the children of our employees, as well as to other children in the neighbourhood. We encourage the children employed in the mill to attend the school, but although in many cases we lowered the hours of attendance at the mill in order to admit of time being spent at school without hardship to the child, we have found that it is impossible to get the children working in the mills to attend school for any period. The school is managed by the local Presbyterian Mission, half of the total cost of maintenance being borne by the Mission and the remaining half by the Company. The average daily attendance is 92, and the latest reports of the inspector of schools have shown that satisfactory progress is being made. We do not knowingly permit non-working young children to accompany workers to any portion of the mills where machinery is running, or where there is likely to be any danger, and we presume that most employers act similarly. Special legislation on this point does not appear to us to be necessary. All the rooms in this factory are well ventilated, and our experience of other mills would incline us to consider that there is no necessity to introduce legislation fixing a standard of air for factories. The factory inspector could be empowered to make suggestions where necessary, and his recommendations would undoubtedly be carried out by the factory owners except when they were considered fanciful, in which case a reference could be made to the chief inspector of factories, whose decision would be final. Certainly in all textile factories the owners would consider it of importance from their own stand-point that the air be as pure as possible. None of the processes conducted in this factory necessitate humidifying, and we are not therefore immediately concerned with any regulations which may be introduced in this connection, but in view of the fact that the atmosphere varies so considerably in India according to the district or season, we are of opinion that no legislation should be introduced fixing a standard of moisture for the air in factories. Regarding latrine accommodation, we find that one seat for every 40 workers is more than ample for the requirements of our labourers, and we do not think that the standard should be raised beyond one seat for 50 workers. We have provided separate urinal accommodation, and find that the workers take to it fairly well, but we do not consider that such should be insisted upon. It would in our opinion be advisable that the doors (not being sliding doors) of all working rooms should be hung so as to be opened readily from the inside outwards in case of fire. But, before enforcing any rules to this effect, sufficient time, say two years, should be given to the factory owners within which to alter all existing doors. The doors of all new buildings would of course be made so as to comply with the proposed regulation. No further precautions for fencing machinery appears to us to be necessary. We make it a rule to be particularly careful in this connection. We consider that it would be eminently desirable to secure uniformity in the administration of the Factory Act throughout India. Inspectors could, as at present, act under the authority of the local Government for the district; and all orders to the factory owners would be issued under the same authority. But the final decision on any debateable point in connection with the administration of the Factory Act should in our opinion rest with the chief inspector of factories. It is in our opinion very necessary that full time factory inspectors be appointed. At present, in this district, the Civil Surgeon for the time being is joint inspector of factories, and as the majority of these officers have little or no practical knowledge of factory conditions, their recommendations are sometimes lacking in practicability, and are thus likely to result in unnecessary inconvenience being caused to factory owners. We would also say that we consider the reports of all inspectors, medical and local, should be sent to the chief inspector of factories, and not as at present to the District Magistrate. The total number of employees engaged by the New Egerton Woollen Mills Company Limited is at present about 1,100. This number includes 50 to 60 children, and about 40 women. The daily attendance varies considerably during the year principally owing to the fact that our labour is recruited from the agricultural class in the immediate vicinity of the mills, and consequently during the harvesting periods the attendance is largely reduced. The nature of the work carried on would at times necessitate the mill, or certain departments of it, being worked overtime in order to comply with urgent Government orders for clothing; but during the past ten years there has been no occasion on which the mill, as a whole, was engaged beyond the ordinary working hours which, as will be seen by reference to the subjoined table, average slightly under 10½ hours a day. The hours worked *per* day during each month vary, as will be noticed, from 9·3 to 11·5. It has, however, occasionally been necessary to work portions of the weaving and carding and spinning departments beyond the ordinary working hours, but this has at no time affected more than 20 per cent.—all adult males—of the total number employed. Further, this extra work has only been required during the months November to January. During these months the ordinary working hours are only 9½ a day, and the extra hours brought the total worked by the men so employed last year up to 12·80 hours a day for that period, *viz.*, 45 days, in which they worked overtime. We give below particulars of the average hours worked each month during the past ten years, and also show the extra time worked over the same period, with full particulars of the men engaged:—

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	1897.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.
January	9·4	9·4	9·6	9·8	9·4	9 5	9·3	9·3	9·5	9·4	9·5
February	10 0	10·2	10·5	9 8	9·7	9 3	9·4	10·0	9·6	9·4	9·7
March	10·3	10 6	10·5	10·3	10·5	9 3	10 4	10·6	10·4	10·5	10·4
April	11·5	11·2	10 6	11·2	11·1	11·2	10·6	10·6	10·8	11·2	11·4
May	11·4	11·0	11·2	11·1	11·2	10·9	10·9	11·0	11·0	10·9	10·9
June	11·0	11·6	11·2	11·1	11·3	11 0	11·0	11·0	11·2	10·6	10·7
July	10·9	11·3	11·1	11·1	11·0	11 0	11·0	11·0	11·1	10·6	10 7
August	10 9	11·1	11·2	11·2	10·9	10·9	10 9	11 2	10 9	10·4	10·4
September	11·4	11·5	11·1	11·1	11·1	11·1	11·1	11·1	11·2	11·2	11·2
October	10·6	10·6	10·0	10·7	10·3	10·3	10·3	10 3	10·4	10·4	10·4
November	10·0	10 0	9·7	9·7	9·7	9·4	9·3	9·6	9·7	9·5	9·7
December	10·0	9·4	9·3	9·4	9 3	9 5	9·4	9·4	9·4	9·4	9·4
Average *per* day for the year	10 6	10·6	10·4	10·5	10·5	10·3	10·4	10·5	10·50	10·30	10·44
Maximum number of men employed at night ...	90	70	116	120	128	50	...	25	192	165	152
Number of days on which overtime was worked ...	44	54	21	51	63	7	...	4	37	36	45
Average number of overtime hours worked ...	4·2	4·3	3 60	4	4	4	...	5	3	3 6	3 4
Average hours worked *per* day by men employed at night...	14·2	13·7	12·90	13·40	13·30	13·50	...	14·40	12·40	13·0	12 8

For the past few years, when working at night, it has been our system to close not later than 9 P.M., and to grant an interval of half an hour at 6 P.M. to the men working late, in order that they might take food. It will therefore be seen that, as the earliest hour of opening the mill during November-January is 6-30 A.M., the maximum hours worked a day at any time by any man during last year were thirteen. As mentioned above the number of hours worked by the mill varies from 9·3 to 11·5; and according to our records there is no appreciable difference between the out-turn *per* hour *per* spindle or *per* loom for the days of differing length. We would, however, say that in our openion any work done by artificial light is not beneficial to the employer, and we only resort to overtime when forced to do so by the exigencies of trade. The labourers in this district appear to be content with working a day which is regulated by the sun; but when employed at night for a continuous period beyond a fortnight or so, they cease to expend even the ordinary very limited amount of energy on their work, and the outturn distinctly deteriorates both in quality and quantity. So much is this the case that we would prefer to lose orders rather than work any department overtime continuously for a greater period than a month at the outside. We are not in a position to give any statistics bearing out the above opinion, but our general belief is as stated. The following table will show how our day is regulated throughout the year. It gives the time of opening and closing during the year 1907:—

	Starting time.	Stopping time.	Interval.	Average number of hours worked.
From January 2nd to 5th	7 A. M. ..	5-30 P. M. ...	One hour ...	9·3
„ „ 7th to 31st	„ „ ...	5-45 „ ...	Do. ...	9·6
„ February 1st to 11th	„ „ ...	„ „ ..	Do. ...	9·5
„ „ 12th to 23rd	„ „ ...	6 „ ...	Do. ...	9·8
„ „ 24th to 28th	„ „ ...	6-30 „ ..	Do. ...	10 5
„ March 1st to 18th	„ „ ...	„ „ ...	Do. ...	10·3
„ „ 19th to 30th	6-45 „ ...	„ „ ..	Do. ...	10·5
„ April 1st to 14th	6-30 „ ...	6-45 „ ...	Do. ...	11·1
„ „ 15th to 24th	5-15 „ ...	6-30 „ ...	Do. ...	11·1
„ „ 25th to 30th	„ „ ...	7 „ ...	Do. ...	11 5
„ May 1st to 5th	5 „ ...	6-45 „ ...	Two hours ...	11·5
„ „ 6th to 31st	5-30 „ ...	6-30 „ ...	Do. ...	10·8
„ June 1st to 30th	„ „ ...	„ „ ..	Do. ...	10·8
„ July 1st to 31st	„ „ ...	„ „ ...	Do. ...	10·8
„ August 1st to 10th	„ „ ..	„ „ ...	Do. ...	10·7
„ „ 12th to 31st	6 „ ...	„ „ ...	Do. ...	10·3
„ September 1st to 2nd	6-30 „ ...	„ „ ...	One hour .	11·0
„ „ 3rd to 4th	6 „ ...	„ „ ...	Do. ..	11·5
„ „ 5th to 8th	„ „ ...	„ „ ...	Two hours .	10·1
„ „ 9th to 23rd	„ „ ...	„ „ ..	One hour ...	11·3
„ „ 24th to 30th	6-15 „ ...	6-15 „ .	Do. ...	10·8
„ October 1st to 5th	„ „ ...	„ „ ...	Do. ...	10·3
„ „ 6th to 27th	6-30 „ ...	6 „ ...	Do. ...	10·3
„ „ 28th to 31st	„ „ ..	5-45 „ ...	Do. ...	10·2
„ November 1st to 10th	„ „ ...	„ „ ...	Do. ...	9·9
„ „ 11th to 16th	„ „ ...	5-30 „ ...	Do. ...	9·8
„ „ 17th to 30th	„ „ ...	5-15 „ ...	Do. ...	9·5
„ December 2nd to 12th	6-45 „ ...	5 30 „ ..	Do. ...	9·6
„ „ 13th to 31st	7 „ ...	„ „ ...	Do. ...	9·3

We do not think that it is either necessary or desirable to require certificates of physical fitness prior to the employment of children on half time. It is obviously in the interest of the

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employers that the children engaged should be capable of doing the limited amount of work required from them, and any interference with the present system would probably cause irritation without producing any beneficial result, either to the children who might be prevented from working in the factory or to anyone else. However, should it be decided to adopt this course, a time limit would be necessary within which the child might be employed pending examination for a certificate. The period so allowed would have to be fixed with reference to the visits of the certifying surgeon, and in our opinion the whole time between two such visits would be the only fair limit. We are also of opinion that a similar period should be allowed in which children might be employed before being certified as of correct age. Half yearly visits of the certifying surgeon would, we consider, be ample for the examination of all children likely to be employed by us. We are strongly of opinion that it would be impossible to introduce any regulations which would work out fairly were it decided to insist that half-timers must receive certificates of medical fitness before being permitted to work as adults. No safeguards that we can think of would be sufficient to prevent half-timers who were refused certificates in one factory from obtaining employment as adults in some other factory. We would further remark that in a large mill, like ours for instance, which is divided into a number of departments, each under the supervision of a separate European, and in each of which distinct operations are conducted, half-timers who had been rejected as medically unfit to work full time in the department in which they had already been employed could without much difficulty secure employment in an other department in the same mill as adults, without the knowledge of the European under whom they had originally worked. Evasions of the law, should it be introduced, would be very frequent, and very difficult to detect even in the best regulated mills, and endless trouble and friction would be the result. We would also point out that no benefit is likely to accrue to an employer from his employing, as an adult, a young person who was really unfit to discharge the duties required of him. During the period in which the person in question would have been employed as a half-timer a sufficient knowledge would have been gained of his physical fitness, and in his own interests the employer would be extremely careful not to pay full time wages to anyone physically unfit to earn them. We would have no objection to the creation of a class of "young persons", provided the hours which they would be permitted to work were not under 12 a day. If it is decided to form this class, we feel practically certain that few factories would find it worth while to work a longer day than that in which they could employ "young persons". A fair limit of age in our opinion would be from 14 to 16. At present the number of workers in our mill of this age is about 150. Should it eventually be decided to restrict the hours of adult labour, we are strongly of opinion that the best method would be to fix a maximum number of hours, leaving it to each individual employer to arrange the time for starting and terminating each day's work. Notification of the hours in which it was proposed to work the mill could be sent at the beginning of each month to the factory inspector of the district. We consider it to be of the first importance that factory inspectors should have had, prior to their appointment, practical experience of Indian mills for a period at least 5 years, preferably as mill managers. Any laws which it may eventually be decided to introduce could be adapted to local conditions, where necessary, in accordance with the advice of the local Government concerned, acting in conjunction with the chief inspector of factories. In the event of it being enacted that the hours of adult labour be restricted to 12 hours a day, we think some provision should be made by means of which factory owners would be enabled to work overtime in case of evident urgency. For instance during a war of any duration we would be required by Government to supplement our ordinary despatches of woollen clothing by extra supplies, and this would necessitate our plant being worked beyond the ordinary hours. It would in our opinion be unreasonable to expect employers to build quarters for their workers. But as the labour supply fluctuates very much owing to the migratory tendencies of the coolies, many factory owners are finding it to be to their best interests to provide suitable quarters for their employees. This Company have from time to time erected quarters as they were required, and at present there are 228 houses in our village, and we are now engaged erecting a further number. Our present scheme aims at bringing the total up to 500 quarters, which we anticipate will be sufficient to house those of our employees who at present are likely to prefer to live in our quarters rather than in the surrounding villages. The houses now being erected measure 12′ × 10′, and each house has a private court-yard measuring 12′ × 10′. The average cost of each house will be Rs. 300 and as the rent charged to the coolies will be in most cases eight annas a month per house, we hope that in time the quarters will become popular. Suitable arrangements for effective sanitation are made, and it is also intended to allot a special general playground in addition to the open space which already exists between each line of houses. It may interest the Commission to know that this Company have established a well-equipped dispensary in connection with the mills, which is in the charge of a trained hospital assistant. Our employees and their relatives are treated free of any charge and medicines are also supplied free. The number of cases treated during the year is generally about 8,000. We append an abstract of the cases treated during the year 1907. All Sundays are allowed as holidays, and the cleaning of machinery is done on Saturdays, the mills closing down earlier for this purpose. In addition to Sundays we invariably grant a holiday on New Year's day, and on the occasion of the following six native festivals :—

Besakhi, Dasehra, Dewali, Id-ul-Fitar, Id-ul-Zaha and Moharram.

Table showing the number of patients treated at the New Egerton Woollen Mills Company Limited's dispensary, Dhariwal, during the year 1907.

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	Fever.	Pulmonary diseases.	Diarrhœa and dysentery.	Infectious diseases.	Plague.	Minor accidents.	Other ailments.	Total.
January	35	80	5	...	2	7	280	409
February	29	52	6	1	2	7	249	345
March	157	61	3	1	7	3	341	573
April	114	56	11	1	8	8	424	622
May	141	63	95	2	3	4	732	1,040
June	195	78	103	3	4	7	742	1,132
July	161	62	20	...	2	7	626	878
August	120	42	9	1	2	9	505	698
September	187	73	85	1	1	6	543	896
October	111	69	10	...	1	6	500	697
November	81	179	6	...	3	12	313	594
December	59	187	11	2	1	11	289	560
Total ...	1,390	1,002	364	12	36	87	5,543	8,434

Mr. Armstrong, manager of the mill. *Oral evidence.*

Witness stated that his written evidence represented the views of the Company. His experience of industries extended over 16 years, 5 of which had been spent in the woollen trade at Cawnpore and Dhariwal. Their working day varied in length from 9 hours to 11¼ hours, but during the cold weather they occasionally worked overtime. Their longest day was 12½ hours including overtime, and overtime was worked on about 40 days in the year. Overtime only affected particular departments, in which perhaps 200 hands might be engaged. No children or young persons ever worked overtime. The management were averse to overtime working, and only permitted it when there was an urgent Government order. If there was to be a restricted working day, he should like an exemption to permit overtime work in emergencies. Loitering was prevented as much as possible by means of supervision and a check system. On an average each man went away from his post for half-an-hour a day. The hands were fairly steady while at their work inside the mill, but they did not apply themselves like English operatives. Two to three hands in India were required to do what was done by one in England. Some qualities of Indian wool were not as good as English wool. They carefully sorted all their wool; and spun it as far as any English mill could. Large quantities of Indian wool, much more than the amount used in the country, were exported to England. All their labour came from villages close to the mill, and they never had to import hands. During harvest time the mill was rather shorthanded, and it was possible that a few half-timers might then work full time. Their labour was sometimes taken by other mills and by irrigation works, but the men generally returned at the end of a month. Each man took on the average four days' holiday a month in addition to Sundays. He considered the Indian labourer improvident, in that he did not want anything more than was just sufficient to meet his absolute wants. The average man did not work 26 days in the month. The Civil Surgeon came from Gurdaspur twice a year to examine the children. Gurdaspur was 8 miles away, and it would not be convenient to send the children there. They were employed pending the visit of the Civil Surgeon, who saw about 20 on each visit. The doctor had rejected some children. If children had to obtain a certificate of age before employment then he should like facilities for the fortnightly certifying of children. There were 60 children on the register, and he was quite sure that over half of them only worked half-time. No registers of sets were kept, and so he had no check upon the hours of any particular child. The half-timers earned 2 annas or 1 anna 9 pies a day, and a young person from 3 annas to 3 annas 9 pies. The smallest monthly wage of a boy, attending regularly, would be Rs. 2-13-6. The mill observed Sunday as a holiday, and all cleaning work was done on Saturdays. When the mill worked the longer day the children worked in shifts, but during the 9 hour day they came in one hour later and left one hour earlier than the rest of the hands. It was impossible for a child to work more than 10 hours in the mill, even supposing the legal restrictions on employment to be evaded. Occasionally the wool-pickers brought non-working children with them. Plague at times affected their supply of labour, but there had never been a case in their own lines. He had never heard of a case of anthrax in the mill. When they worked up to 9 P. M. they used electric light. For about 20 days in the year they commenced work at 5-15 A. M., but the general starting time for the long days was 5-30 A. M. They would not be inconvenienced if they could not employ half-timers before 5-30 A. M.

LAHORE.

Witness No. 280.

Lieut.-Colonel C. G. Parsons, Deputy Commissioner, Lahore.

Lieut.-Colonel C. G. Parsons, *Oral evidence.*

Witness stated that he had been an *ex-officio* inspector, chiefly in Umballa, Delhi and Lahore, for fourteen years. He was supposed to inspect all factories in each district once a year, but could not get round all the Lahore factories himself, and so had to send different Assistant Commissioners. Witness was very much impresed by the ignorance of the *ex-officio* inspectors; and, judging from his own case, he thought they knew little or nothing about the work. Take the question of fencing, for example; they sent round mere boys, who made suggestions; and his file of suggestions by the different officers was very amusing reading. He put very little reliance on the suggestions or opinions of such officers, and he did not like worrying managers by sending on the reports. There ought to be a provincial man who would do all the inspecting work, and who, after examining the factory, would make his remarks with due forethought and consideration. If witness found a factory manifestly insanitary, he would make suggestions under that head. The Deputy Commissioner had no time to inspect women and children, and decide about their ages. The Deputy Commissioner should be relieved of his present *ex-officio* inspection work, which he had always regarded as farcical. Prosecutions had been threatened on several occasions, but the suggestions made by the *ex-officio* inspectors had never been systematically enforced. Recently a prosecution had been sanctioned, but the proceedings were suspended. He was not keen on worrying managers. That was a mistake. He did not wish to do things which commercial men would regard as inimical to private enterprise. He did not say that he ignored the Act, but he did not want to strangle enterprise in its infancy. Commercial men regarded what they consider the fussy interference of Government as a suppressive factor; and the Act, if worked by a busy body, who considered it of more importance than the industry, would be suppressive. The Punjab industries had enough obstacles without tying them up with red tape. He considered that that was the mercantile feeling in the Punjab on the question whether the Act should be strictly enforced. The Act had not been enforced, partly from a desire to let the people alone, and start their industries, and partly owing to the crass ignorance of the inspectors, who did not know how to enforce many of the requirements of the Act. He did not consider the sanitation of factories worse than that of the towns. He has never found a factory he could not enter, but he had found many streets in the cities which made one sick. People in the Punjab could not answer questions concerning the health of the operatives because the factories had not been long enough in existence. The scarcity of labour was not due to the long hours of the mills. Labour was scarce for all open air work also, and mill labour was not more trying than cultivating work. He attributed the scarcity to plague, and to successive droughts which had increased prices. The menial classes, who fed sparingly had at different times reduced their diet to such an extent that their power of resistence was undermined, and mortality had increased. Workers commanded good wages in the building trade, which had attracted men who were never brick-layers before. There was a general scarcity of labour, and there had been no particular emigration as far as he was aware. He knew that employers of labour regarded the contemplated restrictions foreshadowed in the Commissior's questions in a dubious light. The general opinion was that there should be no fixed working day. If undoubted abuses existed, then it was a good thing, from the humanitarian point of view, to interfere; but it was not desirable to interfere otherwise. He understood there was no evidence of deterioration of physique, and it was therefore anticipating matters needlessly to go out of the way to interfere.

Note.—The witness did not submit written evidence.

Witness No. 281.

Lieut.-Colonel Cunningham, I. M. S., Civil Surgeon, Lahore.

Lieut.-Colonel Cunningham, I. M. S. *Oral evidence.*

Witness stated that he had had twelve years' experience as an *ex-officio* inspector of factories, chiefly in Delhi and Lahore. He considered that in the Punjab there would be hardly enough work for one whole-time medical inspector. There were also some considerable advantages in having an inspection by the man on the spot. Recently there was an accident in a Lahore factory. He was soon on the spot, ascertained the facts of the case, and was able to show definitely that the cause of the accident was the carelessness of the man himself. An inspector, not resident in the station, could not have done that. He had no statistics as to the health of the operatives, but from general observation he was of opinion that, if anything, mill operatives were superior in physique to persons in outside employments. They earned better wages and were well fed. They worked under discipline, and in places where there was fair sanitation and ventilation. The persons who employed the labour also did what they could to prevent sickness. He did not think that phthisis was prevalent among mill hands. The growing lads looked strong. The long hours worked in the Punjab were detrimental to health, but then the people never actually worked these hours. They slacked on account of the long hours, and did no more work than they would do in a 12-hour day. He had visited mills at the hottest time of the day, and did not consider the temperature any worse than what other people had to bear in the Punjab. At harvest time the cultivators earned better wages than mill hands. It might be that the managenment and the long hours were the cause of the absence of Punjabis from the mills. The Dhariwal Mill was in a purely agricultural district, and had not to contend with the attractions for labour always found

in a big city. He considered that 12 hours in a cotton mill were more trying than the eight hours of the railway workshops. He approved of a 12-hour day. The Act had not been strictly enforced in the Punjab, and many mills did not realise that they were breaking the law. *Ex-officio* inspectors drew attention to these irregularities in a mill, but no attention was paid. They now insisted upon the children being certified. Children had been habitually employed on whole time both in Delhi and Lahore, and he had frequently seen children under nine years of age at work. Labour difficulties had been so great that the authorities hesitated to enforce the Act, because it would have militated seriously against the young industries of the Punjab. The provisions relating to children could be gradually enforced. Witness considered that a boy of 14 should not work more than 12 hours a day. In determining age he went by general development and not dentition. He considered that the age of 9 was easier to determine than that of 14, and so one examination for age should be sufficient. He approved of a second examination for physical fitness before the half-timer was allowed to work as an adult.

Lieut.-Colonel Cunningham, I. M. S.

Note.—The witness did not submit written evidence.

WITNESS No. 282.

Mr. James Hation, manager of the Lahore Spinning and Weaving Company, Lahore.

Witness stated that he had had eleven years' experience in the cotton industry in England and 18 years in India, at Ahmedabad, Calcutta and Hinganghat. He considered that the skill of the hands depended mainly upon the management, and that one man was as good as another if carefully dealt with. The production of Lahore was equal to Calcutta, but below that of Hinganghat, which maintains a high standard on account of the management. A fixed 12-hour day would interfere a little at first, but would make no difference in the long run as the hands became better trained. He had examined the men who had said that they would like a 12-hour day, but not less wages. They would not promise to work harder. At present they worked about ten actual hours a day. Out of the 12½ hours the engine worked. In Ahmedabad, he worked the daylight day, which was very convenient. Witness was trying to get local labour into the mill, and was hopeful that the situation would improve. They did not want any more inspection. Time must be given them to work up to the Act, and if the process was gradual, it would not dislocate the industry. He thought he could bring the local workers up to the same standard, as the Ahmedabad men.

Mr. James Hatton. *Oral evidence.*

Note.—The witness did not submit written evidence.

WITNESS No. 283.

Mr. Fakirji E. Bharucha, L. M. E., A. M. I M. E., manager and engineer, Mela Ram Cotton Mills, Lahore.

The working hours of adult males need not be limited. The workmen are very careless and lazy, and waste on an average about 2 hours a day in coming out on one excuse or the other. Some are habitual time-wasters, as they leave work and come out every hour for a smoke, drink or to lurk around latrines and remain out for at least 15 to 20 minutes at a time, and do not go in unless forced by the *Chowkidar*! We import labour from Delhi, Agra, and Cawnpure as Punjabis do not take to work in a mill, and owing to the scarcity of labour strict discipline is impossible. Owing to the peculiar habits of the workmen in coming out of the mill every now and then the physique of the hands has not been affected. If the hours are to be limited, they should not be less than 13 hours, with one hour's stoppage in the middle of the day. It is customary in the Punjab to stop mills for one hour instead of half an hour in the afternoon. The working hours need not be prescribed, as the mills are generally started at sunrise and the time of sunrise is different in different parts of India, and in different seasons. In summer we start our work at 5 in the morning, but in winter we start at 7 A.M., or even later on cloudy days. The time of starting and stopping should be left entirely to the discretion of the mill manager. As we, in the Punjab, give a midday interval of one hour instead of half an hour, we should be allowed to work half an hour longer in the evening. The present rule that no factory should be started before 5 in the morning, or worked after 8 in the evening, is quite adequate.

Mr. Fakirji E. Bharucha. *Written evidence.*

I do not know of any physical deterioration amongst persons between the ages of 12 and 14 years employed as adults, as their habits are such that every one or two hours they go out and take a rest in the open air. In the mills, the work is less hard than these young persons are sometimes seen doing outside. For instance, I have seen children employed in pulling punkhas in private houses and public offices, which work is much more hard and severe than the work of piecing yarn or taking out doffs in a mill. I do not agree to the suggestion of creating a class of "young persons". It will be a great worry to the mill managers, and will aggravate the present scarcity of labour, as these "young persons" will not be employed in the mills owing to their limited working hours. I do not think it desirable that a special register of all workers under the age of sixteen should be kept, as the present system of keeping the children's register is quite sufficient. Employment of women at night should not be prohibited, as by doing so the Ginning Factories would suffer much. These factories employ women largely, and as they have to gin as much *kapas* as they can get in the shortest time possible, they are compelled to work at night. The ginning industry is still in its infancy in the Punjab, and hence every facility should be given. As the raw material can be had in the cotton season only, the ginning factory owners must buy as much *kapas* as they can, and gin it as soon as possible, as it takes nearly 20 days for the cotton to reach the Bombay market from the Punjab by rail or sea. It is considered more

Mr. Fakirji Bharucha. E. profitable to work a ginning factory of say 20 gins day and night than to build and work a factory of 40 gins during the day time only.

The minimum age at which children are allowed to work in factories should not be raised beyond nine. If the age limit were enhanced it would entail much suffering and privation on the parents of the children in these days of famine and high prices of food-grains. Children at the age of nine are strong enough to work in the mills and it is good that they should learn discipline and systematic work in their young days. This would make them good honest workmen. Certificates of age should be required before children are allowed to work in factories. If certificate of physical fitness is also resolved upon the standard of physical fitness should be distinctly prescribed, or the law should be made somewhat elastic in this matter When the half-time children are allowed to work as full-time adults, their original certificates will do, and fresh certificates need not be required. As the age certificate states a child's age, and the date of examining one can easily see if the child has arrived at the adult age prescribed by the law. It should be left entirely to the discretion of the manager or owner of a factory to employ children in morning or afternoon sets. Of course it should be prescribed by the law that the children should be employed in regular sets, but the division of a gang of children into morning and evening sets should be left to the manager of the factory. Factory owners should not be obliged to provide elementary education to children at their own expense This will encourage illegal employment of children for full time, as the children, instead of attending the school, will go and work in the mills without the knowledge of the Government officials. There is no need of making a rule to prohibit non-working young children from accompanying workers to dangerous or unhealthy parts of factories. The managers and the owners already take such precautions and I do not know of any accident which has happened to such a non-working child. I do not think any legislation is required to prescribe a standard of purity of air and moisture in Indian mills. In the hot weather we are compelled to keep open all our doors and windows. The standard of latrine accommodation as at present prescribed is quite sufficient It should be prescribed that all doors of working rooms shall be hung so as to open readily from the inside outwards in case of fire Further precautions for fencing machinery are not necessary. The present rules are quite adequate It is not possible to secure uniformity in the administration of the Factory Act throughout India, as circumstances differ greatly in different districts. Full-time medical inspectors are not required, the present *ex-officio* inspectors are quite sufficient.

Oral evidence.

Witness stated that he had had seventeen years' experience in the cotton industry, as engineer and manager at Ahmedabad, Amritsar and Lahore, as well as in the Central Provinces, Khandesh and Káthiáwár. His mill worked an average twelve hour day, and the longest day would be thirteen and a half hours. The operatives took on an average two hours off a day. The mill would suffer with a fixed twelve-hour day. Labour was scarce; they could not be strict with the hands; and a fixed day would not help them in the Punjab. Perhaps if all mills had an uniform day, it might help the labour supply. If there were plenty of labour then they could work and properly control the operatives for 14 hours as they were accustomed to work long hours. He was compelled to introduce electric light because the hands complained that they were not earning the same amount of wages as the other electric light mills. The operatives took their principal meal in the middle of the day. The workmen were not in the hands of the mistris who, however, occasionally lent money to the operatives, to keep them. The men did not give bribes to the mistries. The coolies in the ginning factory earned from 8 to 10 annas a day, and the mills hands from 5 to 6 annas. He had recruited the men from Rájputána. They were good workers and had remained with him. The wages were paid monthly, and there were no bonuses. He admitted that a fixed twelve-hour day had its advantages, and would probably be economical in the long run. It was his experience in Ahmedabad, that the manager who evaded the Act was most sought after by owners because he could show more production by employing persons illegally than an upright man who refused to do this. In enforcing the Act in the Punjab, some elasticity must be allowed, otherwise he would have to stop all his ring frames as the children would leave the mill rather than return to half time wages. He already paid nearly three-fourth the full-time wages to half-timers, and yet he could not get a sufficient number of children to work all his ring frames. He had therefore to stop nearly one-third of the ring frames for want of children. Since he had been in the Punjab all half-timers worked full time, but they were given a long recess. He admitted that the experience of the railway work-shop seemed to show that the Punjabees appreciated a short day. He stopped weaving four years ago as the cotton was not of sufficiently good quality to weave into cloths, otherwise he could get local weavers. They now sold their yarn locally to hand-loom workers. He approved of a working day from 5 A. M. to 6 P. M., in summer, with one hour interval if a 12-hour day was to be fixed by law. The men preferred a rest at the end of the day rather than a late start. It was very hot in the summer evenings, and it was the practice now to work up to sunset, which meant working considerably after 7 P. M in the long days. Such work was very exhausting.

WITNESS No. 284.

The Honourable Mr. Harkishan Lal, Managing Director of the Lahore Spinning and Weaving Mills Company, and the Punjab Cotton Press Company, Lahore.

The Hon. Mr. Harkishan Lal. *Oral evidence.*

Witness stated that labour had been scarce ever since their mill was started, and the reason given was that the local Punjabis did not like the constant standing at the machines. The working day averaged 13 hours, exclusive of the interval, and the longest day was 13 hours 45 minutes. Witness had had no experience of shorter hours, and so could not say whether they were economical or not. The operatives had never complained to him of the length of the day, and he did not consider the hours a strain on their health. There was a tendency to drink on holidays, but not

on other days. The production would undoubtedly decrease with a shorter day, and the men would be the first to complain of their reduced earnings. If a 12-hour day were uniform throughout the year, he admitted that it possessed certain advantages, and might probably keep labour more stable. He attributed the non-enforcement of the Act to the fact that, at the time it was passed, there were very few factories in the Punjab, and no attention was paid to it. He approved the appointment of a whole-time special Inspector. They had very few boys between the ages of 14 and 16, and the creation of the "young persons" class would not affect their mill. Ninety *per cent.* of the labour was imported. The Punjabis had plenty of opportunities to take other employments and came to mill labour last of all. The length of the day had nothing to do with the matter and a 12½-hour day would not improve the situation. The imported labourers were all in good health; some of the hands had been there since the mill started 8 years ago When they started the mill they relied on obtaining local labour. He approved of a standard of purity of air being fixed. He had no objection to children being certified for age and physical fitness, both as half-timers and before entering the adult stage. At first they worked daylight hours, and it was the operatives themselves who asked for the electric light in order that they might earn wages equal to those in the other mills. There was a big demand for their workmen's houses; he did not provide a school. There was no general desire on the part of the parents to send their children to school.

The Hon. Mr. Harkishan Lal.

Note.—The witness did not submit written evidence.

Witness No. 285.

Lala Ram Sarn Das, Lahore.

Lala Ram Sarn Das. *Written evidence.*

There is no need of limiting the working hours of male adults. There is no abuse in this respect which necessitates such a remedy. The physique of adults working long hours has not been affected. As a general rule, the long hours (where they are in force) are by no means excessive. It will prove a severe hardship to considerable numbers of workmen if the working hours be limited to a small number, as they will, in that case, owing to less savings, be unable to support well their families, who mainly consist of idle consumers. If the hours of workers are to be limited, no less than 13 hours should be fixed as the legal limit. It will be impracticable, with a view to enfore such a restriction, to prescribe any fixed hours of commencing and closing the daily work for the whole country. The time of sunrise and sunset differs greatly in different seasons and is not alike in different Provinces. It will consequently be impossible to have uniform hours of working throughout India for the whole year alike. All that can practically be prescribed is that no workman should work more than 13 hours in a single day. The engine should, no doubt, be stopped between noon and 2 P.M. for at least half an hour, when a factory does not work more than 13 hours. In factories working on the day shift system, no legal working hours are necessary. Hours of working of the various shifts should be left to the discretion of employers, on the condition that no adult works more than 13 hours. There ought to be a midday interval, if any of the shifts works more than six hours, but not otherwise. I am not aware of any illegal employment as adults of lads between 12 and 14 years. There seems consequently no necessity of creating a new class of 'young persons." If such class is created it will simply put factory owners to a lot of inconvenience and trouble. Since, as required by the law in force, registers are kept of workers under 14 years, there seems no necessity whatever for another register for workmen of ages between 14 and 16. The employment of women at night should not be prohibited. In ginning factories, for instance, women are mostly employed. It will cause a great deal of loss and inconvenience to ginning factory owners if women are prohibited from working at night. It will also discourage the ginning industry. It will prove very injurious if the minimum age at which children are allowed to work in factories be raised. Boys of eight years get adapted to work better than they do at nine. It is proper, and is already the practice, to get certificates of age and physical fitness for children. They should be allowed to work in factories, if they are not passed by the Government medical officer appointed for the purpose on the day they are sent for examination, for a few days until they are passed. As medical officers enter the age in the certificates on passing the half-timers, when they become adults there seems no necessity whatever for a certificate of age being required a second time; that would simply cause unnecessary expense and trouble to factory owners. There is no need of legislation requiring Government to fix regular sets; that ought to be left to the convenience of factory owners. It will prove rather harmful than beneficial to compel children working in factories to receive education. It is to the interest of boys who have, under the force of circumstances, to work in factories to be left alone in the matter of education. Whatever may be said of the benefits of education from a mere theoretical point of view, it is a positive fact that illiterate boys can devote their whole undivided attention to their work, and stand a far better chance of success than boys who have received a smattering of education, or who have their attention divided by devoting a portion of their time to education. The adage that a little knowledge is "dangerous" is specially applicable in this case. Such education as is practicable for factory labourers will, as shown above, prove injurious to the boys themselves, and will throw an unnecessary burden on factory owners. It is also worthy of note that in the present circumstances of the country, boys who receive some little education get averse to any sort of manual labour as a means of earning a livelihood, and what is worse, the parents of such boys, too, regard it as a disgrace to allow their boys to earn their livelihood as workmen in any industry. In various departments of many factories the workers are generally women, most of whom are widows, and have children. They will not be able to serve in the mills if their children be not allowed to be with them. If any legislation be enacted to stop this practice, a good many widows will be thrown out of work, and they themselves with their children will have to lead a wretched life. Factory owners already take a lot of care and precaution to see that such children do not go near the so-called risky machines, and during the last nine years I have not had a single accident to such children in my mills. There is no need whatever of prescribing any analytical standard of the purity of air for factories. All that is necessary, *viz.*, adequate ventilation, is already secured by

Lal Ram Sarn Das.

the law in force. Any further step contemplated to improve matters in this respect will throw a unnecessary burden on factory owners. Workers in factories, as a fact, do every now and the during their working hours go out and thus breathe fresh air, which is quite sufficient for them t avoid the supposed likelihood of their health being injured by any impurity in the air inside th factories. It will be impracticable to fix a suitable standard of moisture for the air in factories while any attempt in this direction will cause inconvenience and trouble to factory owners. I seems perfectly superfluous to fix any standard of purity for the water to be used for humidifyin purposes, as impure water is never used in any factory for that purpose. The present standard o latrine accommodation is quite adequate, and no further legislative action is called for in con sequence. The arrangements in vogue are quite satisfactory in this respect. It may prov advantageous to prescribe that all doors of working rooms be so hung as to open readily from th inside outwards in cases of fire. As far as I am aware, factories have generally their doors alread so hung. The legislation in force prescribes adequate precautions for fencing machinery, and hence no further action is called for. In my opinion, for a time to come at least, there ought not to be uniformity in the administration of the Factory Act throughout India, because the provinces where industries or factories are still in their infancy will greatly suffer, and industrial enterprise will thereby be seriously injured. In places like Bombay, Ahmedabad, &c., where capital began comparatively long ago to be invested in industrial enterprise on Western lines,. considerable numbers among the masses have become accustomed to the various classes of factory work, and large numbers of them have by long experience acquired far greater skill than any workmen available for factory work in other Provinces can be expected to possess. If, therefore, any attempt be made to administer the Factory Act in the Provinces where industrial enterprise is still in the stage of infancy with the same strictness as may be shown in the more advanced Provinces, the result will be extreme hardship to factory owners in respect of many matters, and not only will the progress of industrial enterprise be obstructed in consequence, but even the workmen for whose benefit it seems to be proposed to alter the law will suffer considerable hardship. There are already a good many circumstances that handicap the rapid progress of industrial progress in most parts of India, and for a long time to come it is indispensable for the authorities to show an extremely mild and encouraging attitude in the administration of the law. I may mention that the skilled workmen employed in mills in Bombay Presidency turn out much more work in the same number of hours and on the same class of machinery, as compared with such workpeople in the Punjab. The name of the factory we represent is Rai Bahadur Mela Ram Cotton Mills, of which we are sole proprietors. We employ on an average 280 men, 55 women and 176 children. We have during the last ten years worked our mill for over 12½ hours a day for about 125 days in the year. The average daily number of working hours comes to about 12 during the last 10 years' period. In case a certificate of physical fitness is prescribed as necessary before the employment of children on half time, it will be necessary to fix a period of two weeks within which the children may be allowed to work pending the examination for the certificate. We think a qualified medical practitioner possessing the medical diploma or L. M. S. degree of a university should be declared competent to conduct an examination, and grant an age certificate to half-day workers. We think it would be impracticable to carry the law into effect if, as is suggested, it be enacted that no half-timer should be permitted to work as an adult unless medically certified as physically fit for full-time work. It seems to be impossible to devise what may be regarded as the indispensable standard of "physical fitness" to be possessed by a half-timer, to entitle him to obtain the required certificate. At best it will depend on the mere whim or conjecture of different medical men to pass or reject the half-timer applicants. It can never be imagined that any factory owners will like to employ physically unfit workers in their factories; and consequently the matter should be left to the discretion of the factory owners The only qualification that can practically be made indispensable is that of age. It will cause unnecessary trouble to the half-timers if a certificate of physical fitness is prescribed as necessary. It will not be practicable to devise any safeguards to prevent those half-timers that may be rejected in our factory from obtaining a certificate of physical fitness elsewhere. We are not in favour of the suggestion to create a class of "young persons". If eventually such a class be created, and their hours of employment be restricted, the inevitable consequence will be great scarcity of labour, as even now we cannot get a sufficient number of workmen. The natural result will be a rise in the rates of wages, which will seriously affect the already narrow margin of profit. There will be much confusion regarding the arrangement for the employment of half-timers and young persons during a portion of the working hours. We cannot say how far the creation of the class of young persons will affect the hours during which the machinery will run, as this will depend upon the respective numbers of the different classes of workers, which will greatly vary in different cases. Supposing the age-limit of 14—16 years be prescribed for "young persons", the number of such workers now-a-days will be a certain percentage; but this can evidently form no reliable basis for any conclusion, as the number may bear quite a different proportion after a year or so. It would be preferable to fix a maximum number of hours for the operatives to work in the factories, leaving it to the discretion of each individual employer to settle the time for the commencement and termination of the day's work. We think the circumstances of our Province require exceptional treatment in many respects as shown in the general remarks attached. We are afraid that it will be too costly to import from Europe high class inspectors for factory work. On the other hand it will be quite superfluous to import persons of medium qualifications to act as such. In case the importation of inspectors from England be prescribed, it will be advisable to require them to get some experience of the work and circumstances of this country before they be deputed to work as inspectors. In consequence of the extremely different circumstances of this country as compared with England, it will prove very hard to factory enterprise if newly-imported persons (without acquiring any experience of this country) be appointed to work as factory inspectors. It will prove beneficial if persons appointed inspectors here be required to receive a portion of their training in Europe. It is imperatively necessary that if the law be made more stringent in future, there be room in it for the exercise of elasticity in its operation by those intrusted with its administration. In our opinion the provision should be that in no case should it be applied in a hard-and-fast manner in places where industrial enterprise is in its infancy, or in a weak condition owing to any peculiar circumstances.

Witness stated that he had had ten years' experience of the cotton industry. Originally the children only worked half time, but the shift system was not properly organised, and irregularities soon began. Their average day did not exceed 12 hours, but a fixed 12-hour day would reduce production, and mean less wages for the piece-workers. He approved of a 13-hour day, including one hour interval, for India; but the Punjab should have an exemption for overtime work. Their hands were not skilful, and so the Punjab mills had to work longer. He would like a day from sunrise to sunset in the hot days, and for 13 hours in the cold days. Their hands had threatened to leave unless he worked long hours, because they wanted the extra wages. They gave the hands half an hour interval, and expected them back in one hour; they were lazy, and if he gave them one hour they would take 1½ hours. Ginning factories ought to be allowed to employ women at night, as the cotton came in during a very brief season, and if it was not ginned at once there was the danger of it being spoiled.

Lala Ram Sara
Oral evidence.

Note.—The witness did not return the abstract of the oral evidence sent to him for verification.